



)eyeLCD-4700-USN-LD-FX

EYEVIS LCD LINE

User's Manual

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Additional Support

For additional support for eyevis products, please contact:



eyevis GmbH
Hundsschleestrasse 23
D-72766 Reutlingen
Germany

Phone: +49 (0)7121-4 33 03-0
Fax: +49 (0)7121-4 33 03-22
Hotline: +49 (0)7121-4 33 03-290 (netPIX & eyeCON)
Hotline: +49 (0)7121-4 33 03-291 (Cubes & Displays)

web: www.eyevis.de
e-mail: info@eyevis.de
service: service@eyevis.de

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) eyevis user document

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Table of content

Safety / Sicherheit / Sécurité	6		
Safety precaution	6		
Sicherheitsvorkehrungen	12		
Précautions de sécurité	18		
About our product	23		
Features	23		
High-Resolution Wide-Screen panel	23		
Input connection possibilities	23		
Packaging	24		
Unpacking	24		
Packing list	24		
Accessory box	25		
Installation possibilities for EYE-LCD-XSN-LD series	26		
Optional Front-Service-Mechanism	26		
Overview	27		
Mains supply	28		
Controlling the display	30		
The Remote Control (RC)	30		
Opening the On-Screen-Display (OSD)	30		
Navigating in the OSD menu	30		
Special keys and key sequences	30		
Changing the remote control batteries	31		
On-Screen-Display (OSD) menu	32		
Using the OSD menu	32		
Picture menu	33		
Color Management menu	34		
User Color menu	35		
Display menu	36		
PC RGB menu	37		
Setup menu	38		
Info menu	39		
OSD menu	40		
Advanced Setup menu	41		
Matrix Mode menu	42		
Inputs menu	43		
The eyeDeviceSetup software	44		
Starting the eyeDeviceSetup software	44		
The interface of eyeDeviceSetup software	45		
		The Load/Save area	46
		The selection area	46
		The parameter area	47
		Establishing communication	48
		Establishing communication	48
		Entering the wall size	49
		Reading the configurations	49
		Saving the configuration	49
		Load the configuration	49
		Parameters	50
		User	50
		Setup	51
		Service	53
		Status	54
		Preference	55
		Reports	56
		Effects in continuous operation of LCDs	57
		Image sticking	57
		Mura	57
		Shade formation	57
		Prevention of undesirable effects	58
		Evaluation of visual range	59
		Pollutions	59
		Tolerance limits for bonded glass surfaces	59
		Tolerance limits for optional touch surfaces	59
		Failure of pixel	59
		Overview acceptable total number of dot defects	60
		Troubleshooting guide	61
		Malfunction or trouble	61
		Warranty terms and conditions	62
		Duration and validity of warranty	62
		Proof of purchase	62
		Warranty service or exchange during warranty period	62
		Dead On Arrival (DOA)	62
		Return-to-Base-Warranty (Bring-In Warranty)	62
		Repair and return	62
		Temporary exchange equipment during repair time	62
		Warranty on repairs	62
		Warranty exclusions	63
		General exclusions	63

<i>"Image Sticking" (memory) effect and "Mura"</i>	63
<i>Failure of pixel</i>	63
<i>Accessories</i>	63
<i>Factory-applied serial number</i>	63
Service contact	63
Advised procedure for raising a claim	64
<i>Consider the manual before raising a claim</i>	64
<i>Prepare necessary information</i>	64
<i>Approval by eyevis</i>	64
<i>Service code: RMA number</i>	64
<i>Packing</i>	64
<i>Transport</i>	64
<i>Costs not covered by warranty defects</i>	64
Legal and other claims	64
Limitations of liability	65
Appendix	66
Appendix: Technical specification	66
Appendix: RS232 protocol	68
Appendix: Timings	72
Appendix: Assigning display IDs	75
Index	77

About this manual

Read and pay attention to this manual. It contains important information on the product. In particular, note all of the safety instructions and warnings.

Keep this manual in a safe place!

Warnings used

NOTICE

Indicates a hazard that could lead to **damage or destruction of the product**.



The general warning symbol indicates a hazard that could lead to **injuries or death**. In the text section, the general warning symbol is used in conjunction with the warning levels described below.

CAUTION

Indicates a hazard that could lead to **minor or moderate injuries**.

WARNING

Indicates a hazard that could lead to **death or serious injury**.

DANGER

Indicates a hazard that leads to **immediate death or serious injury**.

Symbols used

►	Indicates a single action or multiple actions which do not have to be performed in any specific order.
1. 2. 3.	Indicates a set of actions that have to be performed in a specific order.

Safety / Sicherheit / Sécurité

Safety

Safety precaution

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD product, please read the following precautions carefully before using the product.

-) Read instructions — All operating instructions must be read and understood before the product is operated.
-) Keep this manual in a safe place — These safety and operating instructions must be kept in a safe place for future reference.
-) Observe warnings — All warnings on the product and in the instructions must be observed closely.
-) Follow instructions — All operating instructions must be followed.
-) Cleaning — Unplug the power cord from the AC outlet before cleaning the product. Use a dry cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.
-) Attachments — Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
-) Water and moisture — Do not use the product near water. Do not install the product in a place where water may splash onto it. Be careful of equipment which drains water such as an air-conditioner.
-) Ventilation — The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a sofa, rug or other similar surface, since they can block ventilation openings. Do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
-) Power cord protection — The power cords must be routed properly to prevent people from stepping on them or objects from resting on them.
-) The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the LCD panel breaks.
-) Overloading — Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
-) Entering of objects and liquids — Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
-) Servicing — Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.

-) Repair — If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.
 - When the power cord or plug is damaged.
 - When a liquid was spilled on the product or when objects have fallen into the product.
 - When the product has been exposed to rain or water.
 - When the product does not operate properly as described in the operating instructions.
 - Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
 - When the product has been dropped or damaged.
 - When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
-) Replacement parts — In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorised parts can result in fire, electric shock and/or other danger.
-) Safety checks — Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
-) Wall mounting — When mounting the product on a wall, be sure to install the product according to the method recommended by the manufacturer.
-) Heat sources — Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).
-) Batteries — Incorrect use of batteries may cause the batteries to burst or ignite. A leaky battery may corrode the equipment, dirty your hands or spoil your clothing. In order to avoid these problems, make sure to observe the precautions below:
 - Use the specified batteries only.
 - Install the batteries with due attention to the plus (+) and minus (-) sides of the batteries according to the instructions in the compartment.
 - Do not mix old and new batteries.
 - Do not mix batteries of different types. Voltage specifications of batteries of the same shape may vary.
 - Replace an exhausted battery with a new one promptly.
 - If you will not use the remote control for a long time, remove the batteries.
 - If leaked battery fluid gets on your skin or clothing, rinse immediately and thoroughly. If it gets into your eye, bathe your eye well rather than rubbing and seek medical treatment immediately. Leaked battery fluid that gets into your eye or your clothing may cause a skin irritation or damage your eye.
-) Usage of the monitor must not be accompanied by fatal risks or dangers that, could lead directly to death, personal injury, severe physical damage or other loss, including nuclear reaction control in nuclear facility, medical life support system, and missile launch control in a weapon system.
-) Do not stay in contact with the parts of the product that become hot for long periods of time. Doing so may result in low-temperature burns.

Safety instructions

-) The TFT colour LCD panel used in this monitor is made with the application of high precision technology. However, there may be minute points on the screen where pixels never light or are permanently lit. Also, if the screen is viewed from an acute angle there may be uneven colours or brightness.
-) Please note that these are not malfunctions but common phenomena of LCDs and will not affect the performance of the monitor.
-) Do not display a still picture for a long period, as this could cause a residual image.
-) Never rub or tap the monitor with hard objects.
-) Please understand that eyevis bears no responsibility for errors made during use by the customer or a third party, nor for any other malfunctions or damage to this product arising during use, except where indemnity liability is recognized under law.
-) This monitor and its accessories may be upgraded without advance notice.
-) Do not use the monitor where there is a lot of dust, where humidity is high, or where the monitor may come into contact with oil or steam, as this could lead to fire.
-) Ensure that the monitor does not come into contact with water or other liquids. Ensure that no objects such as paper clips or pins enter the monitor as this could lead to fire or electric shock.
-) Do not place the monitor on top of unstable objects or in unsafe places. Do not allow the monitor to receive strong shocks or to strongly vibrate. Causing the monitor to fall or topple over may damage it.
-) Do not use the monitor near heating equipment or in places where there is likelihood of high temperature, as this may lead to generation of excessive heat and outbreak of fire.
-) Do not use the monitor in places where it may be exposed to direct sunlight.
-) Please be sure to constantly remove dust and garbage that has attached to the ventilation opening. If dust collects in the ventilation opening, it may lead to excessive heat, outbreak of fire, or malfunction. As a standard, clean the inside of the monitor once every year. If dust collects inside the monitor, it may lead to excessive heat, outbreak of fire, or malfunction. Please request a cleaning of the inside of the monitor from an authorized Eyevis servicing dealer or service centre.
-) Images cannot be rotated on this monitor.
-) When using in vertical orientation, you will need to prepare appropriately orientated content in advance.
-) Please make sure that the socket-outlet is installed near the System and is easily accessible. The Power supply cord serves as a disconnect device.

The power cord

-) Do not damage the power cord nor place heavy objects on it, stretch it or over bend it.
-) Do not use damaged extension cords. Damage to the cord may result in fire or electric shock.
-) Use only the power cord supplied with the monitor.
-) Do not use the power cord with a power tap. Adding an extension cord may lead to fire as a result of overheating.
-) Do not remove or insert the power plug with wet hands. Doing so could result in electric shock.
-) Unplug the power cord if it is not used for a long time.
-) Do not attempt to repair the power cord if it is broken or malfunctioning. Refer the servicing to the service representative.

NOTICE

This is a class A product according EN 55022: 2010. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate counter measures.

NOTICE

To maintain compliance with EMC regulations, use shielded cables to connect to the following terminals:
PC/AV DVI-D output terminal, PC/AV DVI-D input terminal, PC/AV HDMI input terminal, PC D-SUB input terminal, PC RGB input terminals, and RS-232C input/output terminals.

 WARNING

If a monitor is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using fixing devices like wall mount brackets recommended by the manufacturer.
- Only using furniture that can safely support the monitor.
- Ensuring the monitor is not overhanging the edge of the supporting furniture.
- Not placing the monitor on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the monitor to a suitable support.
- Not standing the monitors on cloth or other materials placed between the monitor and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the monitor or its controls.

 WARNING

Especially for child safety

- Don't allow children to climb on or play with the monitor.
- Don't place the monitor on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on a "larger than life" monitor. Care should be taken to place or install the monitor where it cannot be pushed, pulled over, or knocked down.
- Care should be taken to route all cords and cables connected to the monitor so that they cannot be pulled or grabbed by curious children.

Zu diesem Handbuch

Lesen und beachten Sie dieses Handbuch. Darin stehen wichtige Informationen zum Produkt. Beachten Sie insbesondere alle Sicherheits- und Warnhinweise.

Bewahren Sie diese Anleitung sorgfältig auf!

Verwendete Warnhinweise

ACHTUNG

Kennzeichnet eine Gefahr, die zur **Beschädigung oder Zerstörung des Produkts** führen kann.



Das allgemeine Warnsymbol kennzeichnet eine Gefahr, die zu **Verletzungen oder zum Tod** führen kann. Im Textteil wird das allgemeine Warnsymbol in Verbindung mit den nachfolgend beschriebenen Warnstufen verwendet.

⚠ VORSICHT

Kennzeichnet eine Gefahr, die zu **leichten oder mittleren Verletzungen** führen kann.

⚠ WARNUNG

Kennzeichnet eine Gefahr, die zum **Tod** oder zu **schweren Verletzungen** führen kann.

⚠ GEFAHR

Kennzeichnet eine Gefahr, die **unmittelbar zum Tod** oder zu **schweren Verletzungen** führt.

Verwendete Symbole

►	Kennzeichnet einen einzelnen Handlungsschritt oder mehrere Handlungsschritte, jedoch ohne feste Abfolge.
1. 2. 3.	Kennzeichnet eine Folge von Handlungsschritten, deren vorgegebene Reihenfolge eingehalten werden muss.

Sicherheit

Sicherheitsvorkehrungen

Elektrizität erfüllt viele nützliche Aufgaben, kann aber auch Personen- und Sachschäden verursachen, wenn sie unsachgemäß gehandhabt wird. Dieses Produkt wurde mit Sicherheit als oberster Priorität konstruiert und hergestellt. Dennoch besteht bei unsachgemäßer Handhabung u.U. Stromschlag- und Brandgefahr. Um mögliche Gefahren zu vermeiden, befolgen Sie beim Aufstellen, Betreiben und Reinigen des Produkts bitte die nachstehenden Anleitungen. Lesen Sie im Interesse Ihrer eigenen Sicherheit sowie einer langen Lebensdauer des LCD-Gerätes zunächst die nachstehenden Hinweise durch, bevor Sie das Produkt in Verwendung nehmen.

-) Bedienungsanleitungen lesen — Nehmen Sie das Produkt erst in Betrieb, nachdem Sie alle diesbezüglichen Hinweise gelesen und verstanden haben.
-) Bedienungsanleitung aufbewahren — Diese Bedienungsanleitung mit den Sicherheits- und Bedienungshinweisen sollte aufbewahrt werden, damit Sie im Bedarfsfall jederzeit darauf zurückgreifen können.
-) Warnungen beachten — Alle Warnungen auf dem Gerät und in den Bedienungsanleitungen sind genauestens zu beachten.
-) Anleitungen befolgen — Alle Anleitungen zur Bedienung müssen befolgt werden.
-) Reinigung — Ziehen Sie vor dem Reinigen des Produkts das Netzkabel. Reinigen Sie das Gerät mit einem trockenen Tuch. Verwenden Sie keine flüssigen Reiniger oder Aerosol-Sprays.
-) Zusatzgeräte und Zubehör — Verwenden Sie ausschließlich vom Hersteller empfohlenes Zubehör. Bei Verwendung anderer Zusatzgeräte bzw. Zubehörteile besteht evtl. Unfallgefahr.
-) Wasser und Feuchtigkeit — Benutzen Sie das Gerät nicht in der Nähe von Wasser. Montieren Sie das Gerät unter keinen Umständen an einer Stelle, an der Wasser darauf tropfen kann. Achten Sie dabei besonders auf Geräte, aus denen zuweilen Wasser tropft, wie etwa Klimaanlage.
-) Belüftung — Die Belüftungsschlitze und andere Öffnungen im Gehäuse dienen der Belüftung des Geräts.
-) Halten Sie diese Öffnungen unbedingt frei, da eine unzureichende Belüftung zu einer Überhitzung bzw. Verkürzung der Lebensdauer des Produkts führen kann. Stellen Sie das Gerät nicht auf ein Sofa, einen Lappen oder ähnliche Oberflächen, da die Belüftungsschlitze dadurch blockiert werden können. Stellen Sie das Gerät auch nicht in ein umschlossenes Gehäuse, wie z.B. in ein Bücherregal oder einen Schrank, sofern dort nicht für eine ausreichende Belüftung gesorgt ist oder die Anweisungen des Herstellers befolgt werden.
-) Netzkabel-Schutz — Die Netzkabel sind so zu verlegen, dass sie vor Tritten geschützt sind und keine schweren Objekte darauf abgestellt werden.
-) Das LCD-Panel ist ein Glasprodukt. Es kann daher brechen, wenn es zu Boden fällt oder einen Schlag oder Stoß erhält. Achtung: bei einem Bruch des LCD-Panels besteht durch die Glasstücke Verletzungsgefahr.
-) Überlastung — Vermeiden Sie eine Überlastung von Netzsteckdosen und Verlängerungskabeln. Bei Überlastung besteht Brand- und Stromschlaggefahr.
-) Eindringen von Gegenständen und Flüssigkeiten — Schieben Sie niemals irgendwelche Gegenstände durch die Gehäuseöffnungen in das Innere des Geräts. Im Produkt liegen hohe Spannungen vor. Durch das Einschieben von

Gegenständen besteht Stromschlaggefahr bzw. die Gefahr von Kurzschlüssen zwischen den Bauteilen. Aus demselben Grunde dürfen auch keine Flüssigkeiten auf das Gerät verschüttet werden.

-) Wartung — Versuchen Sie auf keinen Fall, selbst Wartungsarbeiten am Gerät durchzuführen. Durch das Entfernen von Abdeckungen setzen Sie sich hohen Spannungen und anderen Gefahren aus. Lassen Sie sämtliche Wartungsarbeiten ausschließlich von qualifiziertem Service-Personal ausführen.
-) Reparaturen — Ziehen Sie in den folgenden Situationen sofort das Netzkabel und lassen Sie das Produkt von qualifiziertem Service-Personal reparieren:
 - Wenn das Netzkabel oder der Netzstecker beschädigt ist.
 - Wenn Flüssigkeit in das Gerät eingedrungen ist oder Gegenstände in das Gerät gefallen sind.
 - Wenn das Gerät nass geworden ist (z.B. durch Regen).
 - Wenn das Gerät nicht wie in der Bedienungsanleitung beschrieben funktioniert.
 - Nehmen Sie nur die in den Bedienungsanleitungen beschriebenen Einstellungen vor. Unsachgemäße Einstellungen an anderen Reglern können zu einer Beschädigung führen und machen häufig umfangreiche Einstellarbeiten durch einen qualifizierten Service-Techniker erforderlich.
 - Wenn das Produkt fallen gelassen oder beschädigt wurde.
 - Wenn das Gerät einen anormalen Zustand aufweist. Jedes erkennbare anormale Verhalten zeigt an, dass der Kundendienst erforderlich ist.
-) Ersatzteile — Wenn Ersatzteile benötigt werden, stellen Sie bitte sicher, dass der Service-Techniker nur die vom Hersteller bezeichneten Teile oder Teile mit gleichen Eigenschaften und gleichem Leistungsvermögen wie die Originalteile verwendet. Die Verwendung anderer Teile kann zu einem Brand, zu Stromschlag oder anderen Gefahren führen.
-) Sicherheitsüberprüfungen — Lassen Sie vom Service-Techniker nach Service- oder Reparaturarbeiten eine Sicherheitsüberprüfung vornehmen, um sicherzustellen, dass das Produkt in einem einwandfreien Betriebszustand ist.
-) Wandmontage — Bei der Montage des Gerätes an der Wand ist sicherzustellen, dass die Befestigung nach der vom Hersteller empfohlenen Methode erfolgt.
-) Wärmequellen — Stellen Sie das Produkt nicht in der Nähe von Heizkörpern, Heizgeräten, Öfen oder anderen Geräten (wie z.B. Verstärkern) auf, die Hitze abstrahlen.
-) Batterien — Durch falsche Anwendung können die Batterien explodieren oder sich entzünden. Eine undichte Batterie kann Korrosion am Gerät verursachen sowie Hände und Kleidung verschmutzen. Um diese Probleme zu vermeiden, beachten Sie bitte die folgenden Sicherheitshinweise:
 - Verwenden Sie nur empfohlene Batterietypen.
 - Achten Sie beim Einlegen der Batterien darauf, dass die Plus- (+) und die Minus- (-) Seite der Batterien gemäß den Anweisungen im Fachinneren richtig ausgerichtet sind.
 - Verwenden Sie nicht alte und neue Batterien gemeinsam.
 - Verwenden Sie keine Batterien unterschiedlichen Typs. Batterien derselben Form können unterschiedliche Spannungswerte besitzen.
 - Ersetzen Sie eine leere Batterie sofort durch eine neue.
 - Wenn Sie die Fernbedienung längere Zeit nicht verwenden, entnehmen Sie die Batterien.

- Wenn ausgetretene Batterieflüssigkeit auf Haut oder Kleidung gelangt, müssen Sie diese sofort gründlich mit Wasser spülen. Wenn Batterieflüssigkeit in die Augen gelangt, dürfen Sie die Augen auf keinen Fall reiben, sondern am besten mit viel Wasser spülen und sofort einen Arzt aufsuchen. Batterieflüssigkeit kann Hautreizungen hervorrufen oder Augenschäden verursachen
-) Bei der Verwendung des Monitors ist darauf zu achten, dass Gefahren für Leib und Leben, Schäden an Gebäuden und anderen Gegenständen sowie eine Beeinflussung von wichtigen oder gefährlichen Geräten, wie z.B. der Nuklearreaktionssteuerung in Atomanlagen, lebenserhaltenden Geräten in medizinischen Einrichtungen oder Raketenabschusssteuerungen in Waffensystemen vermieden werden.
-) Vermeiden Sie es, Teile des Produkts, die sich erwärmen, über längere Zeit hinweg zu berühren. Dies könnte zu leichten Verbrennungen führen.

Sicherheitshinweise

-) Bei der Herstellung des TFT Farb-LCD-Panels dieses Monitors wurde Präzisionstechnologie eingesetzt. Trotzdem können einzelne Punkte am Bildschirm überhaupt nicht leuchten oder ständig leuchten. Bei Betrachtung des Bildschirms aus einem spitzen Winkel können die Farben oder die Helligkeit unregelmäßig erscheinen. Bitte beachten Sie, dass es sich dabei um keine Qualitätsmängel handelt, sondern um allgemein bei LCD-Geräten auftretende Phänomene, welche die Leistung des Monitors in keiner Weise beeinträchtigen.
-) Lassen Sie niemals ein Standbild über längere Zeit hinweg anzeigen, da dies ein Nachleuchten am Bildschirm zur Folge haben könnte.
-) Vermeiden Sie es, den Monitor mit harten Gegenständen abzureiben oder zu berühren.
-) Wir bitten um Ihr Verständnis, dass eyevis über die gesetzlich anerkannte Leistungshaftung hinaus keine Haftung für Fehler übernimmt, die sich aus der Verwendung durch den Kunden oder einen Dritten ergeben, und auch nicht für sonstige Funktionsstörungen oder Schäden, die während der Verwendung am Gerät entstehen.
-) Eine Aktualisierung dieses Monitors und seines Zubehörs ist vorbehalten.
-) Verwenden Sie den Monitor nicht an Orten mit hoher Staubentwicklung, hoher Luftfeuchtigkeit oder an Orten, an denen der Monitor mit Öl oder Dampf in Kontakt kommen könnte, da dies zu einem Brand führen könnte.
-) Achten Sie darauf, dass der Monitor nicht mit Wasser oder anderen Flüssigkeiten in Berührung kommt. Achten Sie auch darauf, keine Gegenstände, wie z.B. Büroklammern oder sonstige spitze Gegenstände, in den Monitor zu stecken. Die Folge könnte ein Brand oder Stromschlag sein.
-) Stellen Sie den Monitor nicht auf instabile Gegenstände oder an andere unsichere Stellen. Setzen Sie den Monitor keinen starken Stößen oder Erschütterungen aus. Wenn der Monitor hinunterfällt oder umkippt, könnte er Schaden nehmen.
-) Stellen Sie den Monitor nicht in der Nähe von Heizungen oder an anderen Stellen auf, an denen hohe Temperaturen auftreten, da dies zu einer übermäßig starken Erhitzung mit der Folge eines Brandes führen könnte.
-) Stellen Sie den Monitor nicht an Orten auf, an denen er direktem Sonnenlicht ausgesetzt ist.

-) Bitte entfernen Sie regelmäßig Staub und Schmutz von der Belüftungsöffnung. Wenn sich Staub an der Belüftungsöffnung ansammeln, kann es zu einer Überhitzung des Geräts und in der Folge zu einem Brand oder zu Fehlfunktionen kommen.
-) Reinigen Sie das Innere des Monitors mindestens einmal jährlich. Wenn sich Staub im Inneren des Monitors ansammelt, kann es zu einer Überhitzung des Geräts und in der Folge zu einem Brand oder Fehlfunktionen kommen. Bitte lassen Sie das Innere des Monitors von einem autorisierten eyevis-Händler oder einem eyevis Servicecenter reinigen.
-) Bilder können auf diesem Monitor nicht gedreht werden. Wenn Sie den Monitor in vertikaler Ausrichtung verwenden, müssen Sie die Bilder zuvor entsprechend drehen.
-) Bitte achten Sie darauf, dass die Steckdose in der Nähe des Systems ist und leicht zugänglich ist. Das Netzkabel dient als eine Trennvorrichtung.

Das Netzkabel

-) Beschädigen Sie das Netzkabel nicht, stellen Sie keine schweren Gegenstände darauf, und überdehnen oder knicken Sie es nicht.
-) Verwenden Sie keine beschädigten Verlängerungskabel. Ein beschädigtes Kabel kann einen Brand oder Stromschlag verursachen.
-) Verwenden Sie nur das mit dem Monitor gelieferte Netzkabel.
-) Verwenden Sie das Netzkabel nicht mit einer Mehrfachsteckdose. Die Verwendung eines Verlängerungskabels kann aufgrund von Überhitzung zu einem Brand führen.
-) Achten Sie darauf, dass Sie beim Einstecken oder Ausstecken des Netzsteckers keine nassen Hände haben, um einen Elektroschlag zu vermeiden.
-) Ziehen Sie das Netzkabel aus der Steckdose, wenn Sie das Gerät längere Zeit über nicht verwenden.
-) Führen Sie keine Reparaturversuche an einem beschädigten oder nicht funktionstüchtigen Netzkabel durch. Überlassen Sie Reparaturarbeiten ausschließlich dem Kundendienst.

ACHTUNG

Dieses Gerät ist ein Produkt der Klasse A gemäß EN 55022: 2010. In Wohnräumen kann dieses Gerät Störsignale erzeugen, die durch entsprechende Abhilfemaßnahmen durch den Benutzer beseitigt werden müssen.

ACHTUNG

Verwenden Sie EMV-gerechte, abgeschirmte Kabel, um die folgenden Anschlüsse zu verbinden:
PC/AV DVI-D-Ausgangsanschluss, PC/AV DVI-D-Eingangsanschluss, PC/AV HDMI-Eingangsanschluss, PC D-sub-Eingangsanschluss, PCRGB-Eingangsanschlüsse und RS-232C-Eingangs-/Ausgangsanschlüsse.

 WARNUNG

Wenn ein Monitor nicht auf einer stabilen Unterlage aufgestellt wird, besteht die Gefahr, dass er kippt oder fällt. Zahlreiche Verletzungen, besonders bei Kindern, können durch einfache Vorsichtsmaßnahmen vermieden werden:

- Bei Verwendung der vom Hersteller empfohlenen Befestigungsvorrichtungen, wie z.B. Wandhaken.
- Stellen Sie den Monitor nur auf Möbelstücke, die ausreichend stark sind.
- Achten Sie darauf, dass der Monitor nicht über den Rand des Möbelstücks, auf dem er steht, vorsteht.
- Stellen Sie den Monitor niemals auf ein großes Möbelstück (z.B. einen Schrank oder in ein Bücherregal), ohne sowohl das
- Möbelstück als auch den Monitor an einem geeigneten Element sicher zu verankern.
- Stellen Sie den Monitor niemals auf ein Tuch oder andere Materialien, die zwischen dem Monitor und dem Möbelstück, auf dem er steht, liegen.
- Weisen Sie Kinder eindringlich darauf hin, dass es gefährlich ist, auf ein Möbelstück zu klettern, um an den Monitor oder seine Regler zu gelangen.

 WARNUNG

Wichtige Hinweise für die Sicherheit von Kindern

- Lassen Sie Kinder niemals auf den Monitor klettern oder am Monitor spielen.
- Stellen Sie den Monitor nicht auf Möbelstücke, die leicht als Stufen verwendet werden könnten, wie zum Beispiel eine Truhe oder Kommode.
- Bedenken Sie, dass Kinder bei Betrachtung eines Fernsehprogramms – und ganz besonders bei einem "überlebensgroßen"
- Monitor – in starke Aufregung verfallen können. Der Monitor sollte so aufgestellt werden, dass er nicht umgestoßen oder gekippt werden kann.
- Alle am Monitor angeschlossenen Kabel und Stränge sollten so verlegt werden, dass neugierige Kinder nicht daran ziehen oder sie ergreifen können.

À propos de ce manuel

Lisez et suivez ces instructions. Ils contient des informations importantes sur le produit. Faites particulièrement attention à toutes les consignes de sécurité et aux avertissements.

Conservez ce manuel soigneusement!

Des symboles d'avertissement utilisés

ATTENTION

Indique un danger qui peut endommager ou détruire le produit.



Le symbole d'avertissement général indique un danger qui pourrait entraîner des blessures ou la mort. Dans le texte, le symbole d'avertissement général est utilisé en conjonction avec les niveaux d'alerte décrits ci-dessous.

⚠ PRÉCAUTION

Indique un danger qui pourrait provoquer des blessures mineures ou modérées.

⚠ AVERTISSEMENT

Indique un danger qui peut provoquer des blessures graves, voire mortelles.

⚠ DANGER

Indique un danger qui provoquer la mort ou des blessures graves.

Symboles utilisés

►	Désigne une action unique ou plusieurs d'actions, qui peuvent être exécutées dans un ordre quelconque.
1. 2. 3.	Signifie une série d'actions qui doivent être exécutées dans l'ordre chronologique.

Sécurité

Précautions de sécurité

L'électricité remplit de nombreuses fonctions utiles, mais elle peut provoquer des blessures et des dégâts matériels si elle n'est pas utilisée correctement. Cet appareil a été conçu et fabriqué en attachant la plus grande importance à la sécurité. Cependant, une utilisation inadéquate peut entraîner une décharge électrique et/ou un incendie. Afin d'éviter tout danger potentiel, veuillez respecter les consignes suivantes lors de l'installation, de l'utilisation et du nettoyage de l'appareil. Afin d'assurer votre propre sécurité et de prolonger la durée de service de votre moniteur LCD, veuillez lire attentivement les précautions ci-dessous avant d'utiliser l'appareil.

-) Lisez ces explications — Vous devez lire et comprendre toutes les informations relatives au fonctionnement de l'appareil avant de l'utiliser.
-) Conservez cette brochure dans un endroit sûr — Ces explications concernant la sécurité et le fonctionnement doivent être conservées dans un endroit sûr pour vous y référer en cas de besoin.
-) Respectez les avertissements — Tous les avertissements figurant sur l'appareil et dans ce mode d'emploi doivent être strictement respectés.
-) Suivez les instructions — Toutes les explications sur le fonctionnement doivent être respectées.
-) Nettoyage — Débranchez le cordon d'alimentation au niveau de la prise du secteur avant de nettoyer l'appareil. Servez-vous d'un linge sec, et n'employez pas de détergents liquides ou en atomiseur.
-) Accessoires — N'utilisez pas d'accessoires non recommandés par le fabricant, car ceci pourrait provoquer des accidents.
-) Eau et humidité — N'utilisez pas cet appareil près de l'eau. N'installez pas le produit à un endroit où il pourrait recevoir de l'eau. Évitez en particulier les emplacements sous les appareils à vidange d'eau tels que les climatiseurs.
-) Ventilation — Des ouïes et autres ouvertures sont prévues dans le coffret de l'appareil pour sa ventilation. Ne recouvrez pas et ne bouchez pas ces ouvertures car une ventilation insuffisante peut provoquer une surchauffe et réduire la durée de vie de l'appareil. Ne placez pas l'appareil sur un sofa, un tapis ou toute autre surface analogue car ceci pourrait obstruer les ouvertures de ventilation. Cet appareil n'est pas conçu pour une installation encastrée; ne le placez donc pas dans un endroit fermé comme une bibliothèque ou une baie à moins qu'une ventilation adéquate ne soit prévue et que les consignes du fabricant ne soient respectées.
-) Protection du cordon d'alimentation — Faites passer les cordons d'alimentation à un endroit où ils ne seront pas écrasés ou coincés par d'autres objets.
-) Le panneau de l'écran à cristaux liquides (LCD) de cet appareil est fabriqué en verre et, par conséquent, il peut se briser si l'appareil tombe ou s'il reçoit un fort impact. Veillez à ne pas vous blesser par les éclats de verre si le panneau LCD devait être brisé.
-) Surcharge — Ne surchargez pas les prises de courant ou les rallonges car ceci peut entraîner un risque d'incendie ou d'électrocution.
-) Insertion de solides ou de liquides — N'introduisez jamais des objets par les orifices de cet appareil, car ils pourraient provoquer une électrocution et/ou un court-circuit en touchant des pièces internes sous haute tension. Pour la même raison, ne renversez jamais de l'eau ou un liquide sur l'appareil.

-) **Entretien** — N'essayez pas de réparer vous-même l'appareil. La dépose des couvercles peut vous exposer à une haute tension ou à d'autres dangers. Confiez toute réparation à un personnel qualifié.
-) **Réparation** — Dans les cas suivants, débranchez le cordon d'alimentation au niveau de la prise secteur et demandez à un personnel qualifié d'effectuer les réparations.
 - Dégât sur le cordon ou la prise de courant.
 - Infiltration d'un liquide ou pénétration d'un objet à l'intérieur de l'appareil.
 - Exposition de l'appareil à la pluie ou à l'eau.
 - Fonctionnement anormal malgré une conformité aux explications du mode d'emploi. Ne réglez que les commandes dont il est fait mention dans le mode d'emploi. Un réglage incorrect des autres commandes peut provoquer des dégâts qui nécessiteraient des réparations complexes par un technicien spécialisé.
 - Chute ou dégâts subis par l'appareil.
 - Tout changement notable ou situation anormale de l'appareil indique qu'une réparation est nécessaire.
-) **Pièces de rechange** — Lorsque des pièces doivent être remplacées, assurez-vous que le technicien a utilisé les pièces spécifiées par le fabricant ou des pièces dont les performances et les caractéristiques sont identiques. Des changements non autorisés de pièces peuvent entraîner un incendie, une électrocution et/ou d'autres dangers.
-) **Contrôles de sécurité** — Après une intervention d'entretien ou de réparation, demandez au technicien de procéder à un contrôle pour être sûr que l'appareil peut être utilisé en toute sécurité.
-) **Installation sur paroi** — Si l'appareil doit être fixé sur une paroi, installez-le en respectant la méthode recommandée par le fabricant.
-) **Sources de chaleur** — Tenez l'appareil à l'écart de sources de chaleur, telles que radiateurs, dispositifs de chauffage, poêles et autres appareils dégageant de la chaleur (y compris les amplificateurs).
-) **Piles** — Une utilisation incorrecte des piles peut les faire éclater ou prendre feu. Une pile qui fuit peut causer des corrosions dans l'équipement, des salissures aux mains ou abîmer vos vêtements. Afin d'éviter ces problèmes, assurez-vous que les précautions suivantes sont appliquées :
 - Utilisez seulement des piles prescrites.
 - Installez les piles en faisant bien attention aux polarités plus (+) et moins (-) des piles selon les instructions dans le compartiment.
 - Ne mélangez pas des piles usagées avec des neuves.
 - Ne mélangez pas des piles de différents types. Les spécifications de voltage des piles de même forme peuvent varier.
 - Remplacez rapidement une pile épuisée par une nouvelle.
 - Si vous n'avez pas l'intention d'utiliser la télécommande pendant une longue période, retirez les piles.
 - Si le liquide provenant d'une pile qui fuit touche votre peau ou vos habits, rincez immédiatement et complètement les parties touchées. Si un oeil est touché, faites immédiatement un bain d'oeil plutôt que de le frotter et cherchez immédiatement un traitement médical. Le liquide provenant de la fuite d'une pile qui atteint votre oeil ou vos habits peut causer une irritation de la peau ou des dommages à votre oeil.
-) **L'utilisation de ce moniteur ne doit pas entraîner des risques mortels ou des dangers qui pourraient provoquer directement la mort, des blessures sur le personnel, des dommages physiques sévères ou d'autres destructions, y**

compris dans le contrôle des réactions nucléaires dans les installations nucléaires, dans le système médical de réanimation, et dans le contrôle de lancement des missiles dans les systèmes d'armes.

-) N'entrez pas en contact direct avec les parties du produit ayant chauffé pendant de longues périodes. Il pourrait en résulter des brûlures à basse température.

Mesures de sécurité

-) Le panneau couleur LCD TFT utilisé dans ce moniteur est fabriqué en application d'une technologie de grande précision. Cependant, il peut avoir sur l'écran des points minuscules où les pixels ne s'allument jamais ou restent allumés en permanence. De même, si on regarde l'écran avec un angle aigu par rapport à la surface de l'écran, les couleurs et la luminosité peuvent paraître inégales. Notez que ce n'est pas un dysfonctionnement mais un phénomène commun des écrans LCD et que cela n'affectera pas les performances du moniteur.
-) N'affichez pas une image fixe pendant une longue période, car cela pourrait provoquer l'apparition d'une image rémanente.
-) Ne frottez pas, ne grattez pas le moniteur avec un objet dur.
-) Il faut savoir que la Eyevis décline toute responsabilité en cas d'erreurs commises durant l'utilisation par le client ou par une tierce personne, ainsi qu'en cas de dysfonctionnement ou de dommage survenu à ce produit pendant son utilisation, excepté dans le cas de responsabilité reconnue par la loi.
-) Ce moniteur et ses accessoires sont susceptibles d'évoluer sans avis préalable.
-) N'utilisez pas le moniteur dans un endroit où il y a beaucoup de poussières, où le degré d'humidité est élevé, ou encore là où il pourrait se trouver en contact avec de l'huile ou de la vapeur, car cela pourrait provoquer un début d'incendie.
-) Assurez-vous que le moniteur ne se trouve pas en contact avec de l'eau ou d'autres fluides. Assurez-vous qu'aucun objet tel que des agrafes et des trombones ne pénètre dans le moniteur, car cela pourrait provoquer un début d'incendie ou un choc électrique.
-) N'installez pas le moniteur au dessus des objets instables ou dans des endroits peu sûrs. Faites attention que le moniteur ne reçoive pas de chocs violents ni de fortes vibrations. Provoquer la chute du moniteur ou le culbuter peut l'endommager.
-) N'utilisez pas le moniteur à proximité d'un appareil de chauffage ou dans des endroits où la température est élevée, car cela pourrait conduire à un dégagement excessif de chaleur et provoquer un début d'incendie.
-) N'utilisez pas le moniteur dans des endroits exposés directement à la lumière du soleil.
-) Veillez à nettoyer fréquemment la poussière et les débris accumulés sur les ouvertures de ventilation. L'accumulation de poussière sur les ouvertures de ventilation risque d'entraîner une surchauffe, un incendie ou un dysfonctionnement. Il est recommandé de nettoyer l'intérieur du moniteur une fois par an. L'accumulation de poussière à l'intérieur du moniteur risque d'entraîner une surchauffe, un incendie ou un dysfonctionnement. Faites nettoyer l'intérieur du moniteur par un revendeur Eyevis ou un centre de services autorisé.
-) Il n'est pas possible de faire tourner les images sur ce moniteur. Quand vous travaillez suivant la direction verticale, prévoyez d'orienter au préalable le contenu.

-) Veuillez vous assurer que la prise est installée près du système et est facilement accessible. Le cordon d'alimentation est un dispositif de déconnexion.

Le cordon d'alimentation

-) N'endommagez pas le cordon d'alimentation, ne déposez pas d'objets lourds sur le cordon d'alimentation, ne tirez pas dessus et ne le pliez pas de manière excessive.
-) Ne pas utiliser de rallonges endommagées. Tout endommagement du cordon d'alimentation peut provoquer un début d'incendie ou un choc électrique.
-) Utilisez seulement le cordon d'alimentation fourni avec le moniteur.
-) Ne branchez pas le cordon d'alimentation sur une prise multiple. Ajouter une rallonge peut entraîner une surchauffe et provoquer un début d'incendie.
-) Ne débranchez pas ni ne branchez la prise d'alimentation avec des mains humides. En ce faisant, vous risquez un choc électrique.
-) Débranchez le cordon d'alimentation si l'équipement n'est pas utilisé pendant une longue période.
-) Ne tentez pas de réparer le cordon d'alimentation s'il est coupé ou s'il ne fonctionne pas correctement. Veuillez prendre contact avec le service après vente et suivre ses recommandations.

ATTENTION

Ce produit appartient à la Classe A d'après la norme EN 55022: 2010. Dans un environnement résidentiel, il peut provoquer des interférences radio et, dans ce cas, l'utilisateur peut être obligé de prendre les mesures nécessaires.

ATTENTION

Afin de satisfaire aux normes EMC, utiliser des câbles blindés pour connecter les bornes suivantes :
Borne de sortie PC/AV DVI-D, borne d'entrée PC/AV DVI-D, borne d'entrée PC/AV HDMI, borne d'entrée PC D-sub, bornes d'entrée PC RVB, et bornes d'entrée/sortie RS-232C.

 AVERTISSEMENT

Un moniteur placé sur un support instable est dangereux en raison des risques de chute qu'il présente. De nombreuses blessures, touchant en particulier les enfants, peuvent être évitées en prenant quelques précautions simples :

- Utiliser les dispositifs de fixation tels que les supports muraux fournis par le fabricant.
- Utiliser uniquement des meubles capables d'accueillir le moniteur en toute sécurité.
- Vérifier que le moniteur ne dépasse pas du bord du meuble sur lequel il est posé.
- Ne pas placer le moniteur sur des meubles hauts, armoires ou étagères, par exemple, sans fixer le meuble concerné et le moniteur à un support approprié.
- Ne pas intercaler de tissu ou toute autre matière entre le moniteur et le meuble sur lequel il est posé.
- Expliquer aux enfants qu'il est dangereux de grimper sur les meubles pour atteindre le moniteur ou ses boutons de commande.

 AVERTISSEMENT

En particulier pour la sécurité des enfants

- Ne laissez pas les enfants grimper sur ou jouer avec le moniteur.
- Ne placez pas le moniteur sur des meubles qui peuvent facilement se transformer en marches comme une commode avec tiroirs.
- Souvenez-vous que les enfants s'excitent souvent en visionnant un programme, surtout sur un moniteur « plus grand que la normale ». Il faut faire en sorte d'installer le moniteur là où il ne peut pas être poussé, tiré, ni basculé.
- Il faut faire en sorte de placer les fils et les câbles connectés au moniteur de façon à ce que des enfants curieux ne puissent pas les tirer ni les saisir.

About our product

The displays of EYE-LCD-FX Series are eyevis' latest displays for the assembly of ultra-super narrow bezel video wall installations.

The display provides Full-HD resolution with 1920×1080 pixels and Direct-LED backlight technology. The devices feature the eyevis-typical robust housing design and enable a minimal gap between two displays.

The newly developed electronics offer an optionally activatable non-sticking mode which prevents burn-in effects or image sticking effects caused by the prolonged representation of static image content.

Features

High-Resolution Wide-Screen panel

With a resolution of 1920×1080 pixels (Full HD) and 16.7 million colours you can display extremely fine pictures with this TFT LCD display.

Input connection possibilities

- 1x Composite Video Input
- 1x HDMI Input
- 1x Display Port Input
- 1x Display Port Output
- 1x DVI-I (digital + analog) Input
- 1x Y/C Input
- 1x IR sensor Input
- 1x RS232 Input
- 1x RS232 Output

Packaging

Unpacking

- The EYE-LCD-Series display is packed with EPE cushion to protect the device during shipping.
- To unpack the device:**
1. Before unpacking your device, prepare a stable, level, and clean surface near a wall outlet.
 2. Place the LCD monitor box in an upright position and open from the top of the box to remove the cushion.
 3. Remove the box handles.
 4. Remove the foam and take out the accessories bag.

Packing list

Tab. 1: Packing list

1	Carton
2	Cushion top
3	Display
4	Accessory box
5	Poly bag
6	Cushion bottom
7	Carton lock / Handles

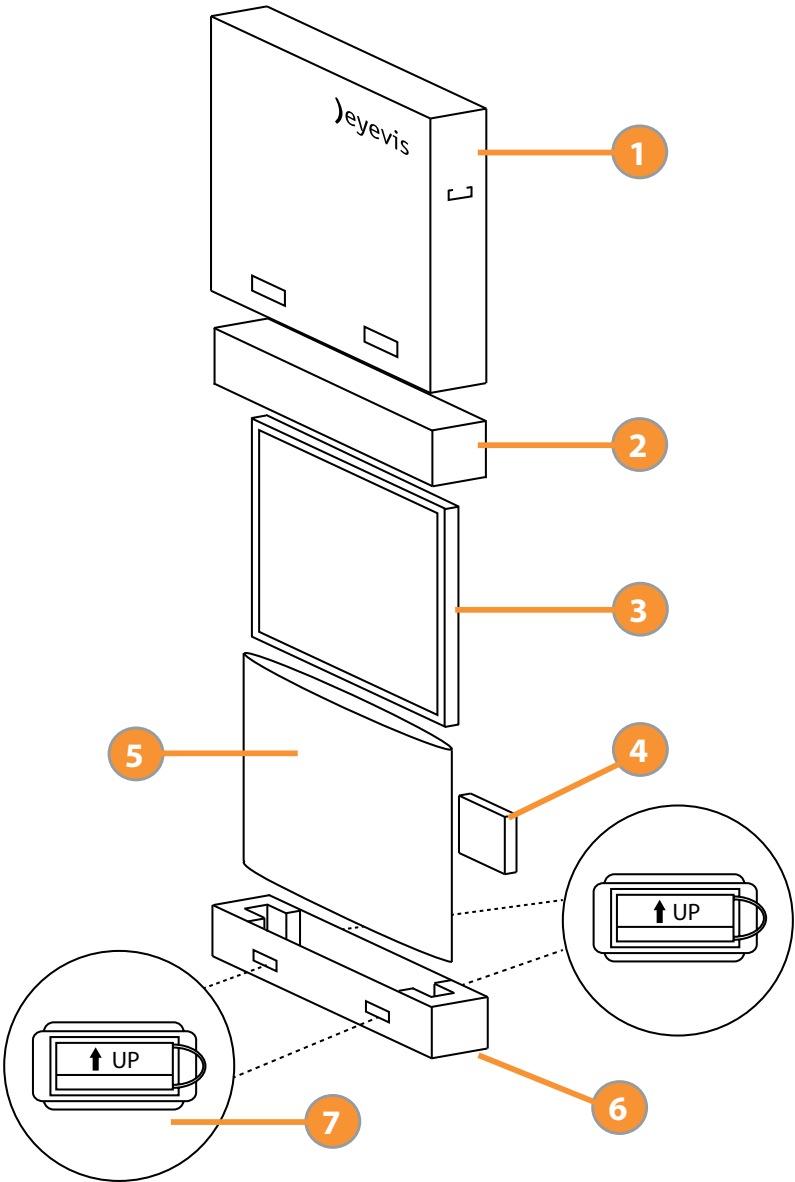


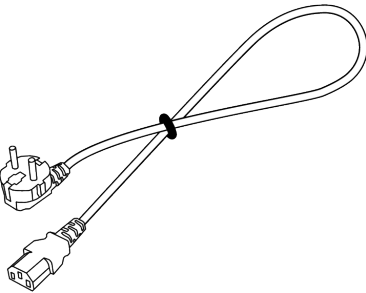
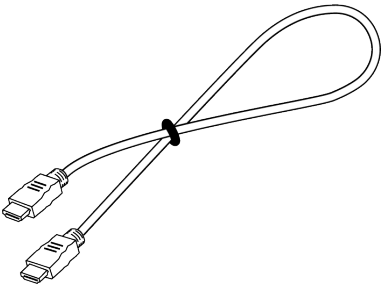
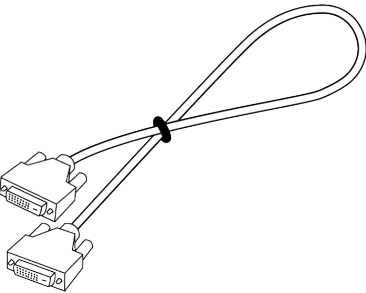
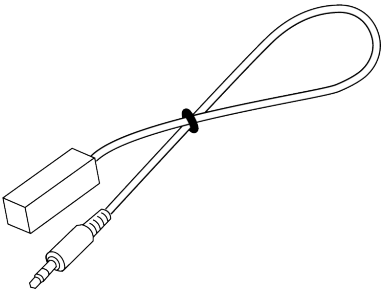
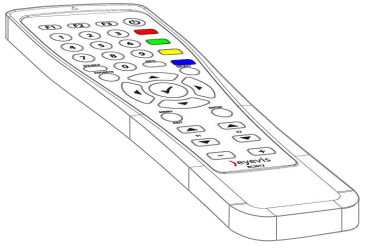
Fig. 1: View of packaging

Accessory box

Tab. 2: Content of accessory box

Item	
1x	Power cord
1x	HDMI cable
1x	DVI cable
1x	IR Extender
1x	Remote Control
2x	Batteries (AAA, in remote control included)
1x	User Manual

Tab. 3: Overview of accessory box content

Power Cord (black)	HDMI Cable
	
DVI Cable	IR Extender
	
OSD Remote Control (2x batteries (AAA) inside)	User Manual
	

NOTE

The pictures are for illustration purposes and may differ from the originals.

Installation possibilities for EYE-LCD-FX series

The displays from the EYE-LCD-FX series are especially designed for the assembly of modular video wall systems. Thanks to their mini bezels and several optimised display characteristics they are perfectly suitable for control room applications where they can be used even in continuous operation.

The standard version EYE-LCD-FX series of the displays has a robust, powder coated metal frame that enables the use of the displays in professional environments. The display frame has VESA approved holes on the backside that allow their quick and simple mounting in a video wall system.



Optionally eyevis provides wall-mounting kits for the displays from the EYE-LCD-FX series. These wall-mounting kits consist of wall-mounting brackets that have to be fixed to the backside of the display and an according wall-fixture. These wall-mount structures are also available as front access versions.

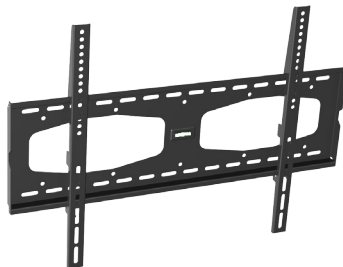


Fig. 2: Wall mounting kit

Optional Front-Service-Mechanism

The displays from eyevis EYE-LCD-FX series are also available with front maintenance option. This new development allows taking of the display panel in a combined video wall without the necessity to demount the entire wall. With a special mechanism even displays in the middle of the wall can be made accessible for service and maintenance works.



EYE-WHLCD-FS-LAND
(for Landscape Installation)



EYE-WHLCD-FS-POR
(for Portrait Installation)

Connectors

Overview

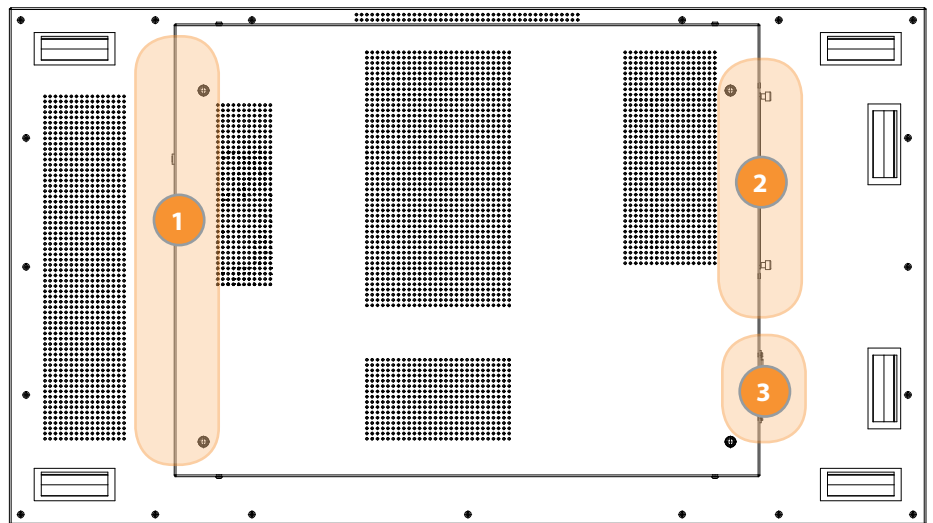


Fig. 3: Rear view of display

1	Connector panel / Status LEDs
2	OPS slot
3	Mains supply

Status LEDs

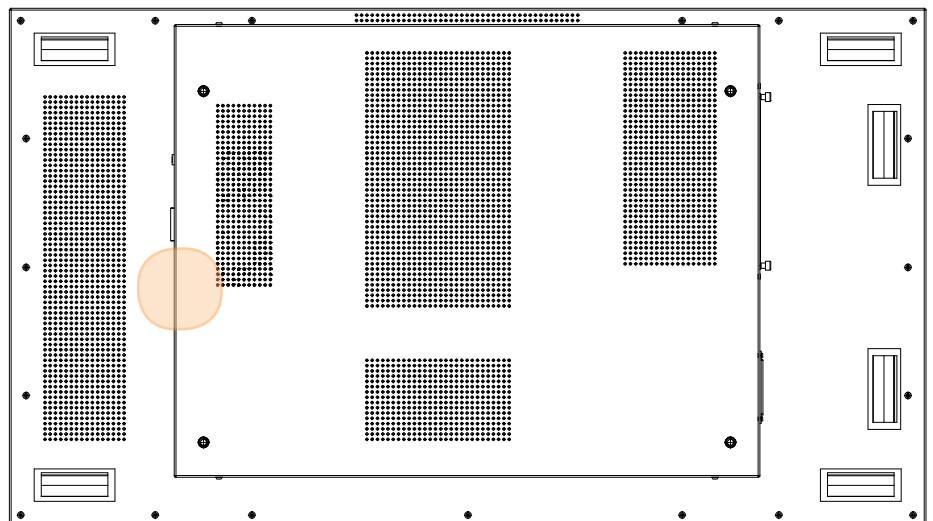


Fig. 4: Position of the status LEDs

Condition	Power Status
Red	Power On, Normal operation
Blinking Red	Power On, No signal
Blinking Green	Error (e.g. overheat)
Off	Mains switch Off
	AC Off

Connector panel

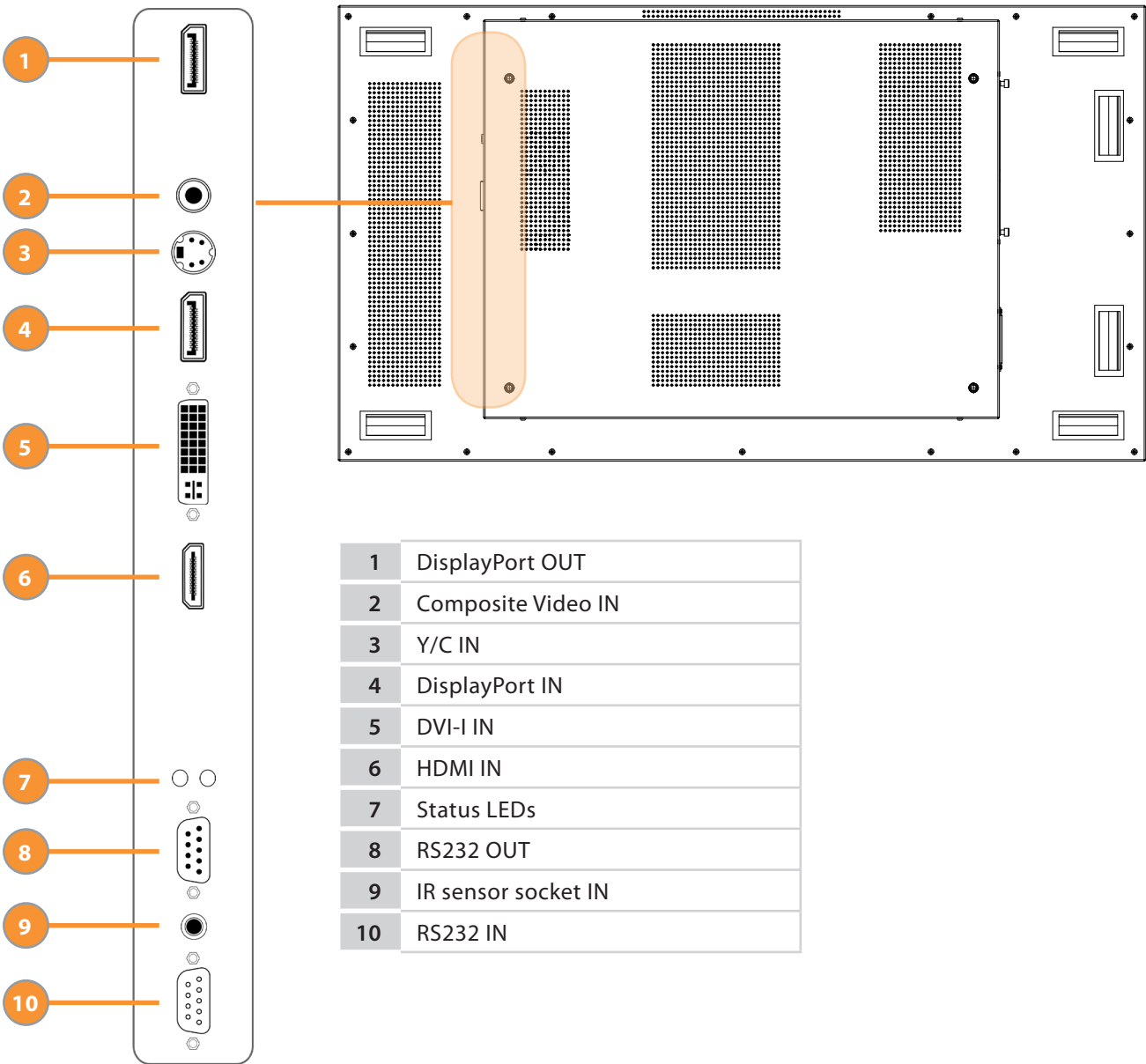


Fig. 5: Control panel

Mains supply

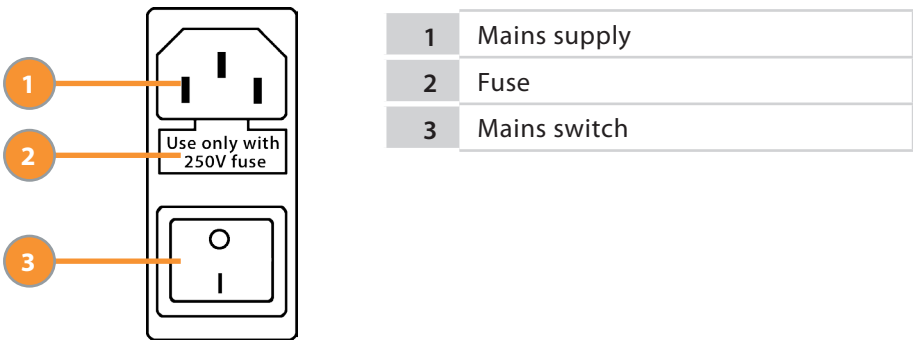


Fig. 6: Mains supply

Setup

Connecting the power cord

- ▶ Use the supplied power cord to connect your LCD panel to the wall outlet.
- ▶ Plug the female power connector into the male connector at the back of the LCD panel.

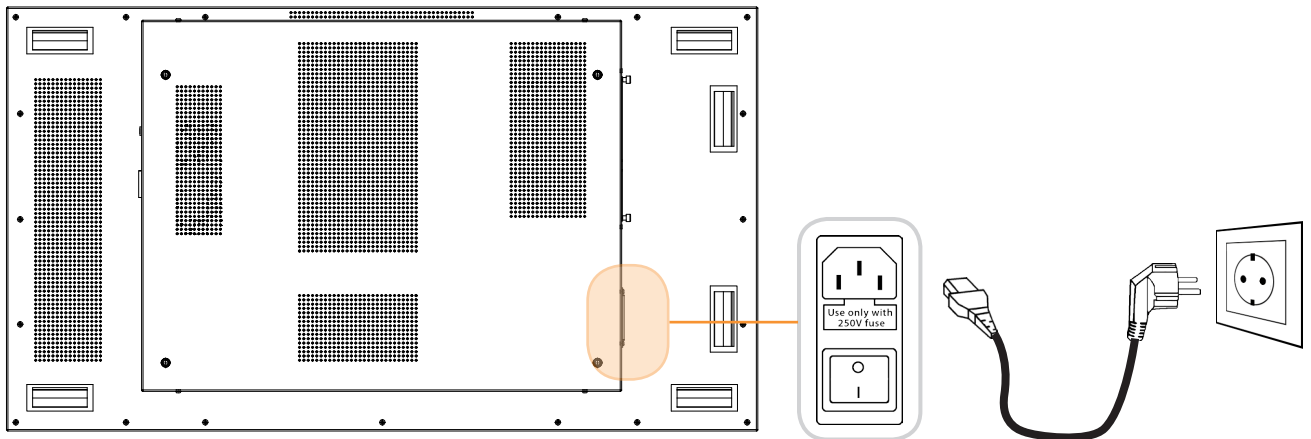


Fig. 7: Connecting mains

Linking the displays

The EYE-LCD-4700-USN-LD-FX displays are especially designed for fixed video wall applications. Display Port signals can be daisy-chained through up to max. 100 displays.

- The size of the video wall matrix may range from 1x1 up to 10x10 displays.
- Displays within a video wall matrix have to be addressed consecutively from 1 - 100.

NOTE:

For detailed information about addressing of the displays, see „Appendix: Assigning display IDs“ on page 75.

Signal-Daisy-Chain

Only DisplayPort signals can be daisy-chained through up to max. 100 displays.

Example: Video wall matrix 3x3 displays

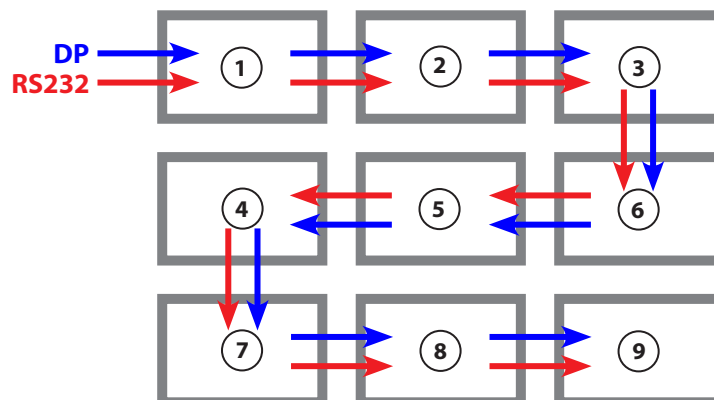


Fig. 8: View of linked 3x3 video wall

Controlling the display

The Remote Control (RC)



The menu functions of the OSD menu can be accessed with the eyevis Remote-Control (RC).

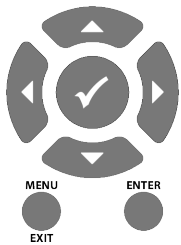
- ▶ To use the RC connect the IR sensor (see picture on the left) with the IR input socket of the **first** daisy-chained display of the video wall.
- ▶ To use the RC aim at the display's IR-Receiver.

) NOTE:

Only **one** IR sensor may be connected.

Opening the On-Screen-Display (OSD)

- ▶ Press the **MENU/EXIT** to open the OSD Menu on the screen.



Navigating in the OSD menu

- ▶ Use the arrow buttons (▶/▼/◀/▲) to navigate through the menu.
- ▶ Press the check mark button (✓) to select a menu item.
- ▶ Press **MENU/EXIT** to abort the current operation and return to the previous menu.
- ▶ For numerical values you can either use the up/down arrow (▼/▲) to increase or decrease values or insert the values directly on the number block. If using the arrow buttons for entering numerical values, holding the keys pressed will toggle larger steps.

Special keys and key sequences

- ▶ You can use the **POWER** button to activate Standby Mode.

You can reboot the display and read back saved settings at any time:

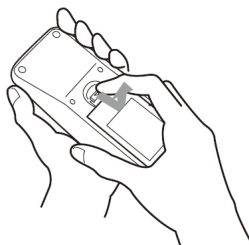
- ▶ Press the sequence **BLUE-RED-YELLOW** (■ ■ ■) to trigger a reset on the currently selected display.



Changing the remote control batteries

NOTE:

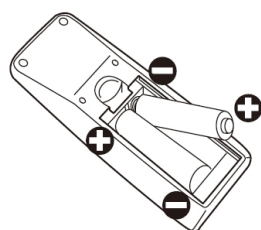
The pictures are for illustration purposes and may differ from the originals.



1

Remove the battery cover

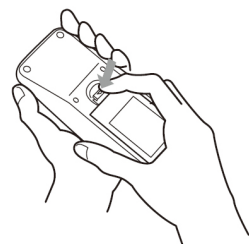
Slide back and remove the battery cover in the direction of the arrow.



2

Insert the batteries

Align and insert two AAA batteries according to their plus and minus ports (as indicated on the button of the battery case of the remote control).



3

Close the battery cover

Replace the battery cover in the direction of the arrow and snap it back into place.

NOTE:

- ▶ Used batteries needed to follow the city rule to be discarded.
- ▶ Battery to be used according to the instruction.

NOTICE

About the remote control

- Don't drop, shake or bump.
- Don't place on wet materials.
- Don't dismantle.
- Don't place in locations with exposure to high-temperature or high-humidity levels.
- Avoid keeping used, old batteries inside the remote control, causing leakage of internal liquid resulting metal rust or fatal damage to the remote control hand unit.



CAUTION

Danger of explosion

Incorrect use of batteries may cause the batteries to explode or to ignite.

On-Screen-Display (OSD) menu

NOTE

The illustrations and certain descriptions in this manual may vary due to development process.

Some settings depend on the input signal and/or product version whether are available or not. Available settings are coloured white and unavailable settings are coloured gray.

Reasons for unavailable settings:

- function is not available for the specific product version
(example: ALC setting only available with connected ALC sensor)
- setting is not available for specific operating mode
(example: PC RGB setting not available for digital signal type)
- setting is not adjustable
(example: Colour adjustment is possible for "User Mode" but not for preset)

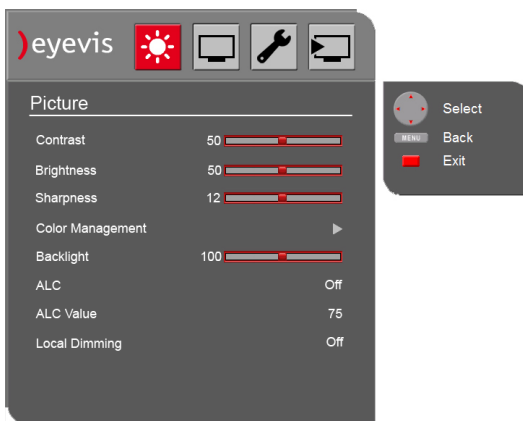
Using the OSD menu

For information about using the OSD menu see „*The Remote Control (RC)*“ on page 30.

Picture menu

The *Picture* menu is used for making common image adjustments.

► **MENU** > *Picture* > **ENTER**

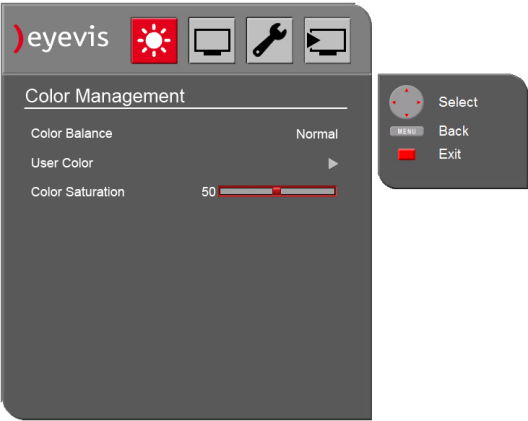


Picture	Contrast	Contrast adjusts the difference between bright and dark image areas. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 50)
	Brightness	Brightness adjusts the pixel colour of the panel. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 50)
	Sharpness	Increases or decreases the sharpness of the image. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-24 (Default: 12)
	Color Management ▶	Colour management contains the settings of colour temperature and intensity of the RGB colour. Press ▶ or ENTER to enter the submenu.
	Backlight	Backlight adjusts the brightness of the LCD backlight. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 100)
	ALC	(only available in connection with an ALC sensor) Activates or deactivates the automatic backlight regulation. Press ◀ or ▶ to select On or Off and then press ENTER . Options: On, Off (Default: Off)
	ALC Value	Adjusts the maximum backlight value for the automatic backlight regulation. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 75)
	Local Dimming	Local dimming adjusts the backlight automatically depending on image content. This increases dynamic contrast. Press ◀ or ▶ to switch On or Off and then press ENTER . Options: On, Off (Default: Off)

Color Management menu

The *Color Management* menu is used for making common colour adjustments.

► **MENU** > *Picture* > *Color Management* > **ENTER**

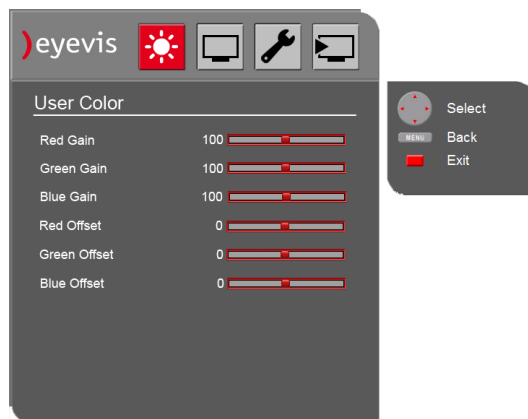


Picture	Color Management	Color Balance	Selects the colour temperature of the image. Press ◀ or ▶ to select the desired option and then press ENTER . Options: Warm, Normal, Cold and User (Default: Normal)
		User Color ▶	User adjustments of the colour temperature and intensity of the RGB colours. Select colour balance "User" to activate this menu. Press ▶ or ENTER to enter the submenu.
		Color Saturation	Adjusts the intensity of a specific colour. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 50)

User Color menu

The *User Color* menu is used for making user colour adjustments.

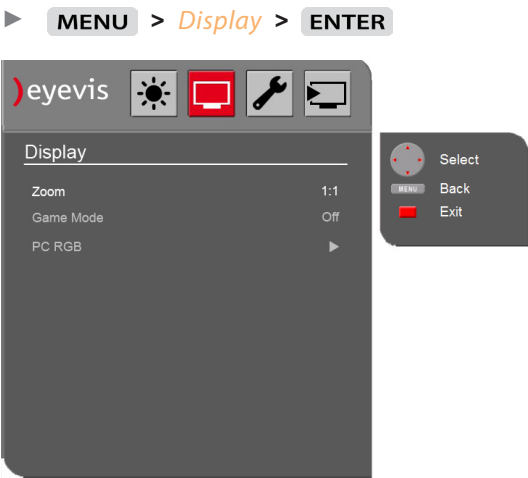
► **MENU** > *Picture* > *Color Management* > *User Color* > **ENTER**



Picture	Color Management	User Color	Red Gain	Adjusts the intensity of the red colour of the image. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 100)
			Green Gain	Adjusts the intensity of the green colour of the image. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 100)
			Blue Gain	Adjusts the intensity of the blue colour of the image. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-100 (Default: 100)
			Red Offset	Adjusts the red offset. Press ◀ or ▶ to select the desired level and then press ENTER . Range: -50-50 (Default: 0)
			Green Offset	Adjusts the green offset. Press ◀ or ▶ to select the desired level and then press ENTER . Range: -50-50 (Default: 0)
			Blue Offset	Adjusts the blue offset. Press ◀ or ▶ to select the desired level and then press ENTER . Range: -50-50 (Default: 0)

Display menu

The *Display* menu is used for making common display adjustments.

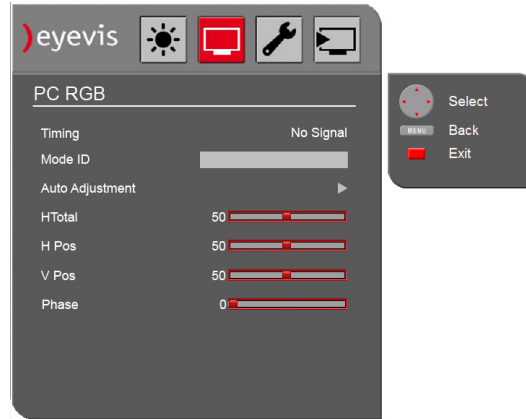


Display	Zoom	Adjusts the aspect ratio of the image. Press ◀ or ▶ to select the desired option and then press ENTER . Options: Full Screen, 16:9, 1:1 and Matrix (Default: 1:1)
	Game Mode	Activates or deactivates the game mode. Game Mode enables faster response on external signal sources e.g. PCs, game consoles etc. Press ◀ or ▶ to activate or deactivate the option and then press ENTER . Options: On, Off (Default: Off)
	PC RGB ▶	Adjusts the RGB settings of the VGA Mode. Press ▶ or ENTER to enter the submenu.

PC RGB menu

The **PC RGB** menu is used for making common RGB adjustments of the PC.

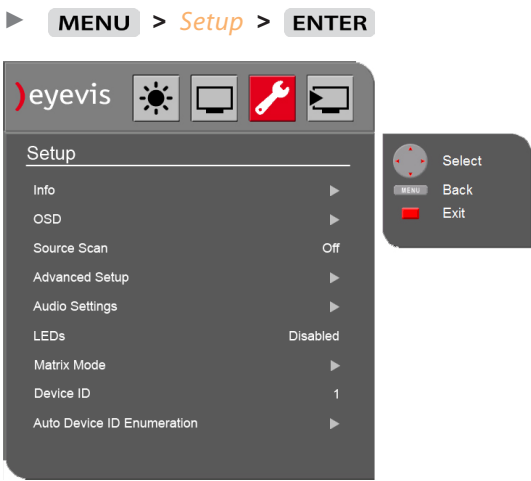
► **MENU** > *Display* > **PC RGB** > **ENTER**



Display	PC RGB	Timing	Increases or decreases the timing setting of image. Press ◀ or ▶ to set the desired timing and then press ENTER .
		Mode ID	Shows the Mode ID. Press ◀ or ▶ to select the desired ID and then press ENTER .
		Auto Adjustment ▶	Activates the auto adjustment of the image. Press ▶ or ENTER to start auto adjustment.
		H Total	(Only analogue VGA) Adjusts the total number of pixel per line. Press ◀ or ▶ to select the desired level and then press ENTER .
		H Pos	(Only analogue VGA) Adjusts the horizontal position of image. Press ◀ or ▶ to select the desired position and then press ENTER .
		V Pos	(Only analogue VGA) Adjusts the vertical position of image. Press ◀ or ▶ to select the desired position and then press ENTER .
		Phase	(Only analogue VGA) Adjusts the phase setting of image. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-63 (Default: 0)

Setup menu

The *Setup* menu is used for making common setup adjustments.

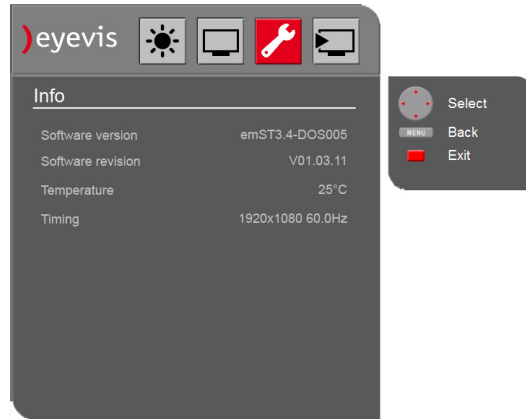


Setup	Info	► Shows information about manufacture data, resolution, device temperature. Press ► or ENTER to display the setup information.
	OSD	► Enters the submenu for OSD adjustments or factory reset. Press ► or ENTER to enter the submenu.
	Source Scan	Starts an automatic search of signals. Press ► or ENTER to start scanning of signal sources.
	Advanced Setup	► Enters the submenu for picture settings and firmware updates. Press ► or ENTER to enter the submenu.
	Audio Settings	► Enters the submenu of the audio settings. Press ► or ENTER to enter the submenu.
	LEDs	Activates or deactivates the LEDs at the backside of the device. Press ◀ or ▶ to select Disabled or Enabled and then press ENTER . Options: Enabled, Disabled (Default: Disabled)
	Matrix Mode	► Adjusts picture settings of the video wall. Press ► or ENTER to enter the submenu.
	Device ID	Setting for manually ID adjustment of the selected display. Press ◀ or ▶ to select the desired ID and then press ENTER . Range: 1-100 (Default: 1)
	Auto device ID Enumeration	► Automatic ID adjustment of the video wall. Press ► to start the automatic device ID enumeration.

Info menu

The *Info* menu shows information about the hardware and software.

► **MENU** > *Setup* > *Info* > **ENTER**

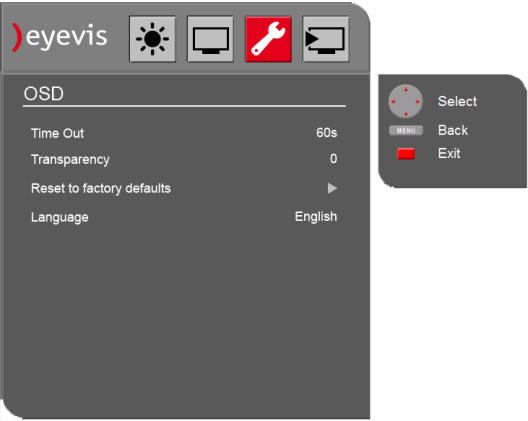


Setup	Info	Software version	Shows the installed firmware version. Press ◀ or MENU to leave the submenu.
		Software revision	Shows the firmware revision. Press ◀ or MENU to leave the submenu.
		Temperature	Shows the actually temperature of the scaler board. Press ◀ or MENU to leave the submenu.
		Timing	Shows the actually resolution and refresh rate. Press ◀ or MENU to leave the submenu.

OSD menu

The *OSD* menu is used for making common OSD adjustments.

► **MENU** > *Setup* > *OSD* > **ENTER**

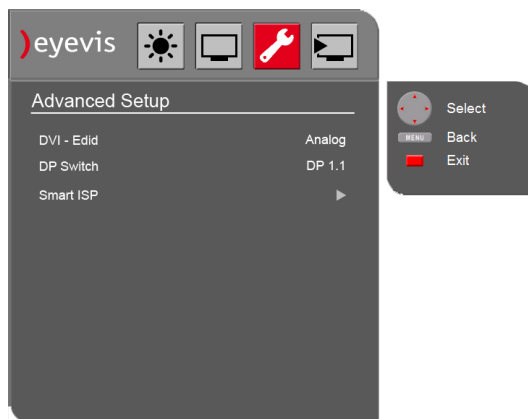


Setup	OSD	Time Out	Adjusts the automatic time out of the OSD menu. Press ◀ or ▶ to select the desired level and then press ENTER . Range: Off-60s (Default: 60s)
		Transparency	Adjusts the transparency of OSD menu. Press ◀ or ▶ to select the desired level and then press ENTER . Range: 0-10 (Default: 0)
		Reset to factory defaults	Resets the values to the factory default. Press ▶ or ENTER to start resetting to factory default.
		Language	Adjusts the language of OSD menu. Press ◀ or ▶ to select the desired language and then press ENTER . Options: English, German (Default: English)

Advanced Setup menu

The *Advanced Setup* menu is used for making advanced adjustments.

► **MENU** > *Setup* > *Advanced Setup* > **ENTER**

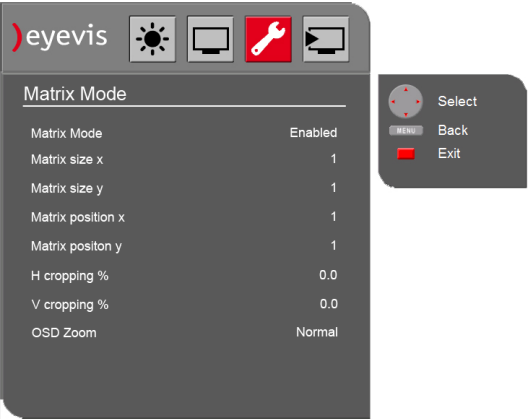


Setup	Advanced Setup	DVI-I Edid	Switches between digital and analog DVI input signal. Press ◀ or ▶ to select the desired option and then press ENTER . Options: Digital, Analog (Default: Analog)
		DP Switch	Selects the DisplayPort version. Press ◀ or ▶ to select the desired option and then press ENTER . Options: DP1.2, DP1.1, Auto (Default: DP1.1)
		Smart ISP ▶	Smart ISP starts the update of the firmware. Press ▶ or ENTER to start the Smart ISP.

Matrix Mode menu

The *Matrix Mode* menu is used for making matrix adjustments.

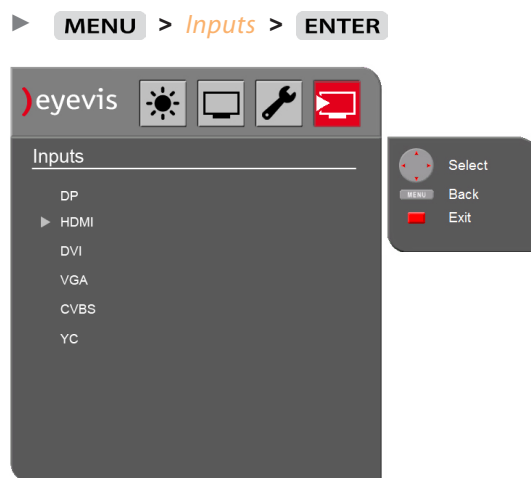
► **MENU** > *Setup* > *Advanced setup* > *Matrix Mode* > **ENTER**



Setup	Advanced Setup	Matrix Mode	Matrix Mode	Enables or disables the video wall mode. Press ◀ or ▶ to enable or disable the option and then press ENTER . Options: Enabled, Disabled (Default: Enabled)
			Matrix size x	Adjusts the horizontal size of the video wall. Press ◀ or ▶ to select the desired value and then press ENTER . Range: 1-10 (Default: 1)
			Matrix size y	Adjusts the vertical size of the video wall. Press ◀ or ▶ to select the desired value and then press ENTER . Range: 1-10 (Default: 1)
			Matrix position x	Adjusts the horizontal position of the display in the video wall. Press ◀ or ▶ to select the desired position and then press ENTER . Range: 1-10 (Default: 1)
			Matrix position y	Adjusts the vertical position of the display in the video wall. Press ◀ or ▶ to select the desired position and then press ENTER . Range: 1-10 (Default: 1)
			H cropping %	H cropping aligns the image for avoidance of overlay by the horizontal bezel. Press ◀ or ▶ to select the desired value and then press ENTER . Range: 0.0-10.0 (Default: 0.0)
			V cropping %	V cropping aligns the image for avoidance of overlay by the vertical bezel. Press ◀ or ▶ to select the desired value and then press ENTER . Range: 0.0-10.0 (Default: 0.0)
			OSD Zoom	Adjusts the size of the OSD menu. Press ◀ or ▶ to select the desired option and then press ENTER . Options: Normal, Big (Default: Normal)

Inputs menu

The *Inputs* menu is used for making input adjustments.



Inputs	DP	Shows connected signals via DisplayPort IN connector. Press ◀ or ENTER to leave the menu.
	HDMI	Shows connected signals via HDMI IN connector. Press ◀ or ENTER to leave the menu.
	DVI	Shows connected signals via DVI-I IN connector. Press ◀ or ENTER to leave the menu.
	VGA	Shows connected signals via VGA IN connector. Press ◀ or ENTER to leave the menu.
	CVBS	Shows connected signals via Composite Video IN connector. Press ◀ or ENTER to leave the menu.
	YC	Shows connected signals via Y/C IN connector. Press ◀ or ENTER to leave the menu.

The eyeDeviceSetup software

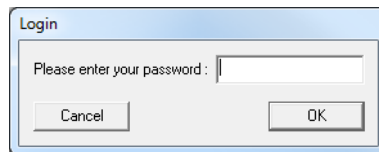


eyevis has developed the eyeDeviceSetup software for setting the displays and for colour adjustment. The eyeDeviceSetup software provides all the necessary functions for adjusting the colours, brightness and contrast of the displays.

Starting the eyeDeviceSetup software

1. Open the eyeDeviceSetup software to configure your video wall.

➤ The login window appears:



2. Choosing the user level. Two user levels are available:

- **User level: (without password)**
This is the normal user level (no service settings are possible).
➤ Confirm with **OK** without entering a password.
- **Administrator: (with password)**
This type is intended for advanced, trained personnel. The password required is available from the eyevis service.
➤ Enter the password and confirm with **OK**.

➤ Once the program has been launched, the program interface is displayed:

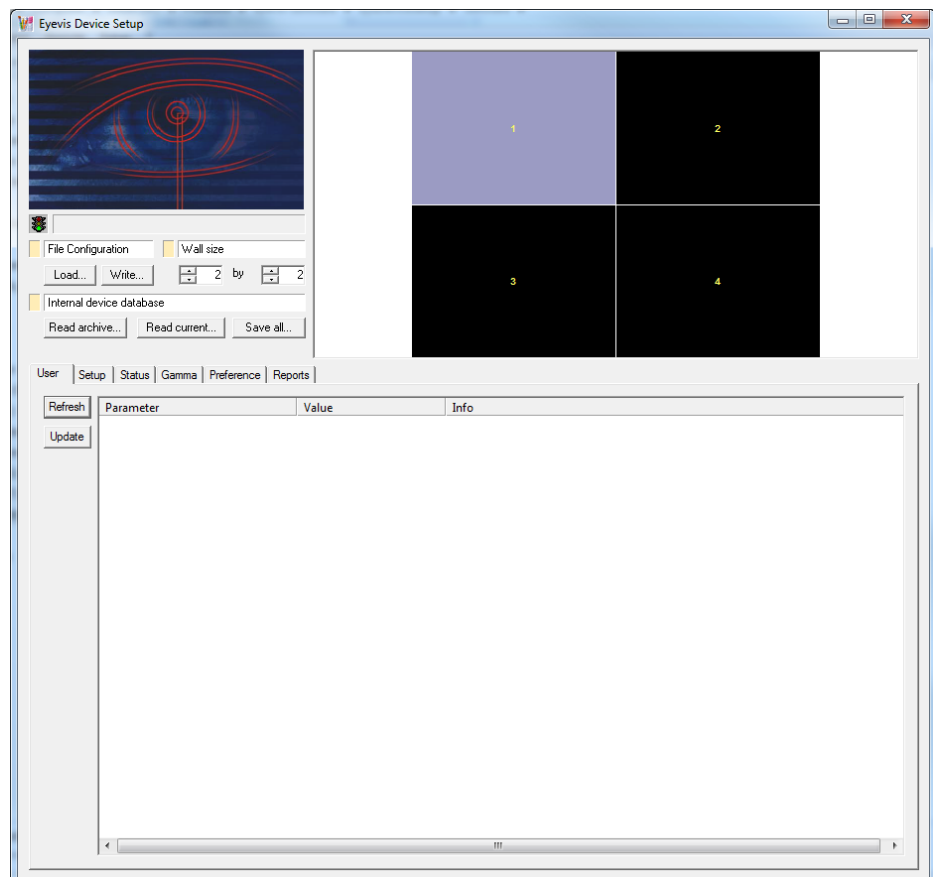


Fig. 9: Interface of eyeDeviceSetup software

The interface of eyeDeviceSetup software

The interface is divided into three areas:

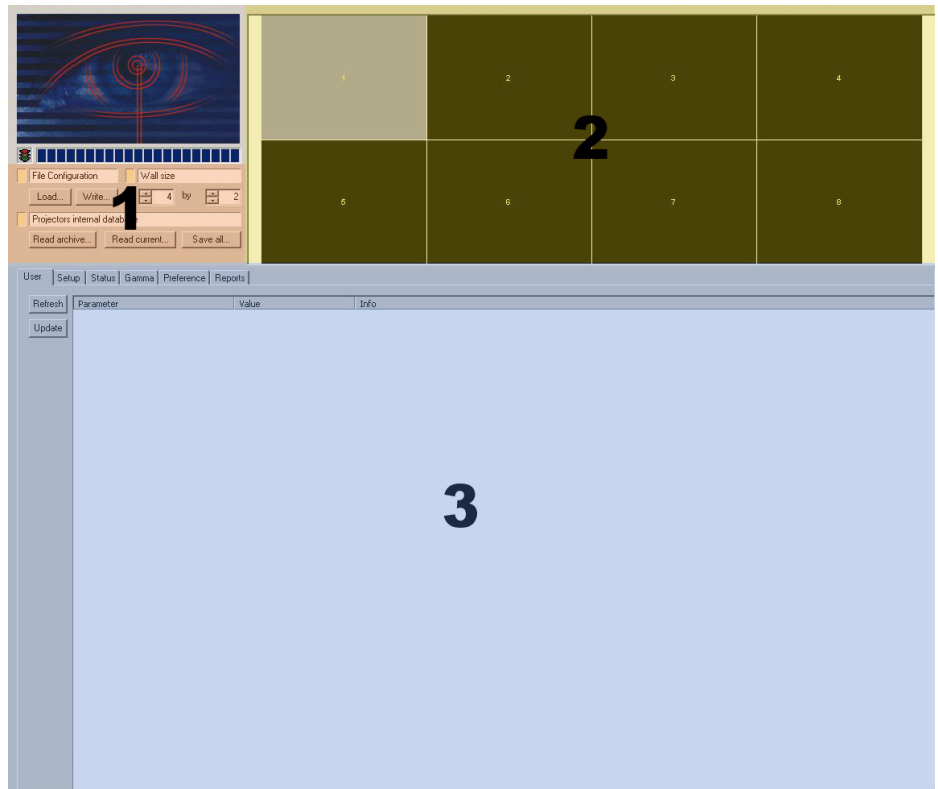
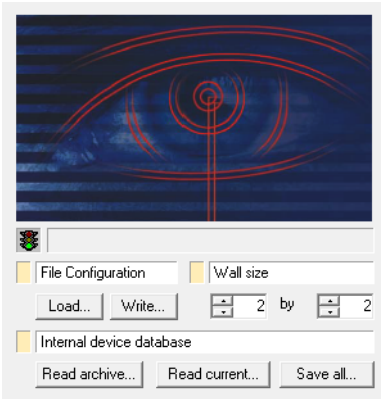


Fig. 10: Interface areas of eyeDeviceSetup software

1	Load/Save area To load and save configurations and set the video wall size.
2	Selection area To display the video wall with the devices. The currently active device is highlighted.
3	Parameter area Windows with parameters that can be selected with tabs.

The Load/Save area

In this area of the window, you can load and save configurations as well as determine the size of the video wall.



File Configuration	Load	Loads a configuration file saved on the PC (for example the saved file of the first system configuration).
	Write	Saves a configuration file with the current settings on the PC.
Wall Size		Enters the size of the wall: • First number: number of vertical columns • Second number: number of horizontal rows
Devices internal database	Read archive	Reads the default settings of the active device. The factory device settings can thus be restored at any time.
	Read current	Reads the current settings of the active device. The settings are then displayed in the parameter area.
	Save all	Saves all the current settings in the device.

The selection area

A preview of your wall configuration appears in this part of the screen. A single device can be selected with the mouse to adjust the settings. If a device is selected, the current settings can be read by clicking on the **Read current** button.

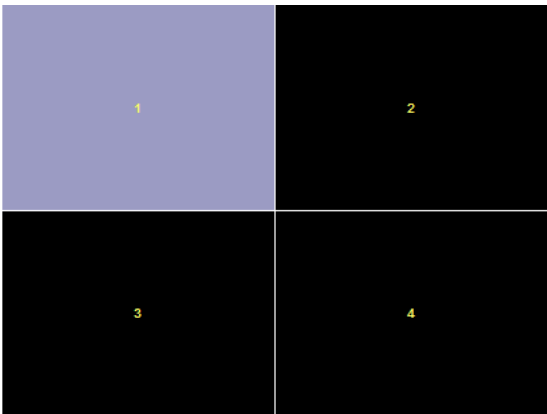


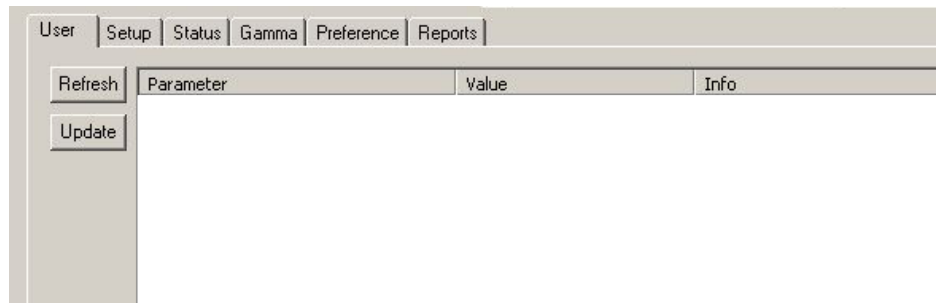
Fig. 11: Visualising a 2 x 2 video wall

To select several devices, click and hold the left mouse button and mark the area you wish.

The parameter area

The settings are displayed and can be changed in this area of the screen. All settings are segmented in various menus.

For more information see chapter „Parameters“ on page 50.



Buttons	Refresh	Refreshes the screen content
	Update	Reloads the settings from the device
Menu	User	Parameters for adjusting the signal functions.
	Setup	Basic password, device and scaler settings of the device.
	Status	Current status information of the device.
	Gamma	Settings of the individual colours (red, green, blue).
	Preference	Settings of the communication to the device.
	Reports	All software status messages are collected in this menu.

Establishing communication



This section describes how to establish the communication with the devices with the help of the eyeDeviceSetup software.

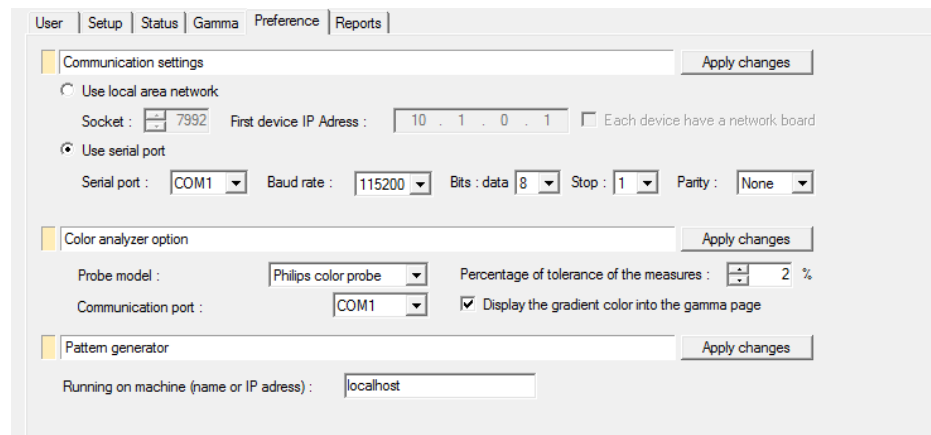
NOTE

The illustrations and certain descriptions in this manual may vary due to development process.

Establishing communication

- Open the **Preference** page.

☞ The serial connection via RS232 interface (**Use serial port**) is selected as standard.



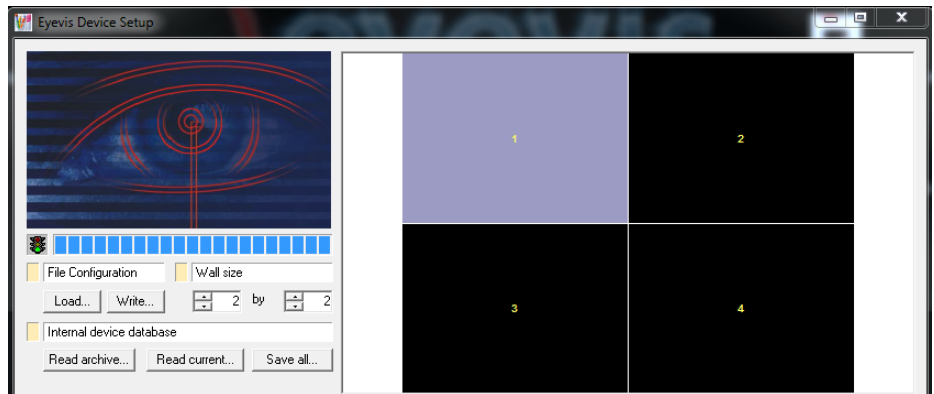
To use the serial port:

1. In the **Serial Port** entry field, select the COM port to which the protector is connected.
2. For the remaining settings, the standard values should match the ones displayed in the screenshot.
3. Press **Apply changes** to apply the new settings.
☞ You can check if the connection is active on the Reports page.

To establish a connection via Ethernet (optional):

- ✓ A connection is established to the first device via the Ethernet cable.
1. Select **Use local area network**.
 2. Enter the IP address to the connected device (the first device).
 3. For the remaining settings, the standard values should match the ones displayed in the screenshot.
 4. Press **Apply changes** to apply the new settings.
☞ You can check if the connection is active on the **Reports** page.

Entering the wall size



In the **Wall size** field, you can enter the number and layout of the devices:

1. In the first window, select the number of columns, which is 2 in the example above.
2. In the second window, select the number of rows, which is 2 in the example above.

Reading the configurations

1. Mark the device you want in the wall view. You can select several devices at once: Click and hold the left mouse button in a field and mark the relevant area.
2. Click on **Read current...**
 The data of the selected devices are displayed in the view window.

Saving the configuration

Once you have adjusted all the settings, you can save the configuration in a file on the PC.

1. Click on **Write....**
2. Select the target location and file name and click on **OK**.

Load the configuration

You can load adjustments from a file which is saved on the PC.

1. Click on **Load....**
2. Select the location and name of the desired file and click on **OK**.

Parameters

The settings are displayed and can be changed in this area of the screen.

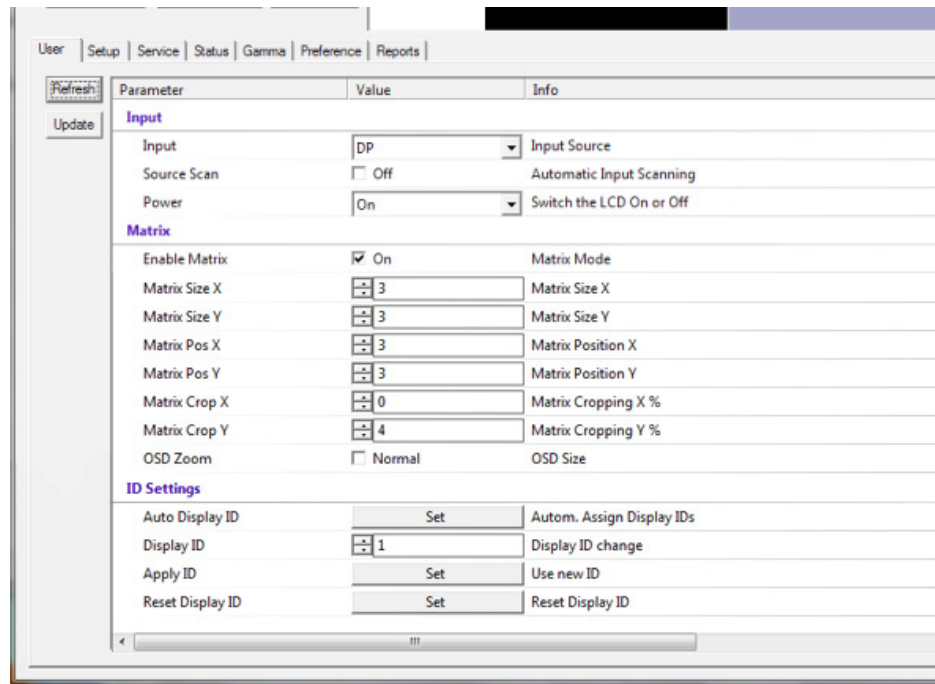
HINWEIS

Changes of the settings may affect adversely the image presentation.

► Before you make changes of the settings, familiarise yourself with settings.

User

In the **User** menu, you can find parameters for adjusting the colour values:



Buttons	Refresh	Refreshes the screen content
	Update	Reloads the settings from the display
Input	Input	Set the input source
	Source Scan	Sets the automatic input scanning on/off
Matrix	Enable Matrix	Sets the matrix mode on/off
	Matrix Size X	Sets the matrix size in horizontal direction
	Matrix Size Y	Sets the matrix size in vertical direction
	Matrix Pos X	Sets the matrix position in horizontal direction
	Matrix Pos Y	Sets the matrix position in vertical direction
	Matrix Crop X	Sets the matrix cropping (%) in horizontal direction
	Matrix Crop Y	Sets the matrix cropping (%) in vertical direction
ID Settings	OSD Zoom	Sets the OSD normal size on/off
	Auto Display ID	Sets the automatic display IDs assignment
	Display ID	Sets the display ID
	Use new ID	Activates the new ID for the device
	Reset Display ID	Reset the display ID

Setup

In the **Setup** menu, settings of basic password, display and scaler can be performed.

Parameter	Value	Info
Security setting		
User password		The user password (no authentication if blank).
Admin password		The administrator password (no authentication if blank).
Picture		
Contrast	50	Contrast
Brightness	50	Brightness
Sharpness	12	Sharpness
Backlight	100	Backlight
ALC	Off	ALC
ALC Value	74	ALC Value
Local Dimming	On	Local Dimming
Color Management		
Color Balance	Normal	Color Balance
Color Saturation	50	Color Saturation
User Red Gain	100	User Red Gain
User Green Gain	100	User Green Gain
User Blue Gain	100	User Blue Gain
User Green Offset	0	User Green Offset
User Blue Offset	0	User Blue Offset
Scaling		
Zoom	Matrix	Zoom
PC RGB		
Timing	1920x1080@59.9Hz	Timing
Autoadjust	Set	RGB Auto Adjust
H Total	0	RGB H-Total
H Position	0	RGB H-Position
V Position	0	RGB V-Position
Phase	0	RGB Phase
OSD		
OSD Language	German	OSD Language
OSD Transparency	0	OSD Transparency
OSD Timeout	12	OSD Timeout
Advanced Setup		
DVI-I EDID	Digital	DVI-I EDID
DP Switch	1.1	DP Switch
Reset Defaults	Set	Reset Factory Defaults
LED	☐ Off	Enable/Disable LEDs

Security Setting	User password	Administrators can enter a password for users here when logged in as Admin.
	Admin password	Administrators can change the admin password here when logged in as Admin.
Picture	Contrast	Sets the contrast
	Brightness	Sets the brightness
	Sharpness	Sets the sharpness
	Backlight	Sets the backlight level
	ALC	Sets the ALC on/off
	ALC Value	Sets the ALC level
	Local Dimming	Sets the local dimming on/off

Color Management	Color Balance	Sets the colour balance to predefined setting • 0=Warm • 1=Normal • 2=Cold • 3=User
	Color Saturation	Sets the colour saturation
	User Red Gain	Sets the red gain
	User Green Gain	Sets the green gain
	User Blue Gain	Sets the blue gain
	User Red Offset	Set the red offset
	User Green Offset	Set the green offset
	User Blue Offset	Set the blue offset
Scaling	Zoom	Selects the zoom setting
PC RGB	Timing	Shows information about timing
	Autoadjust	Sets the RGB auto adjustments
	H Total	Sets the total image position in horizontal position
	H Position	Sets the image position in horizontal position
	V Position	Sets the image position in vertical position
	Phase	Sets the phase level of the image
OSD	OSD Language	Selects the OSD menu language
	OSD Transparency	Sets the transparency of the OSD menu
	OSD Timeout	Sets the timeout of the OSD menu
Advanced Setup	DVI-I EDID	Selects analog or digital for the DVI-I signal
	DP Switch	Selects the version of DP switch
	Reset Defaults	Reset the values to factory default
	LED	Sets the LED on/off

Service

In the **Service** menu, advanced settings for service can be performed.

NOTE:

The service tab is only available in the administrator mode, see chapter „Establishing communication“ on page 48.

Parameter	Value	Info
Advanced command		
At program startup	do nothing	Action to be performed at program startup.
Field by field scanning	☐ disabled	do not use accelerated protocol.
Max number of field	127	Depend on the eeprom size.
Use error dialog	☒ enabled	Report communication error as dialog boxes.
Wait for acknowledgement	☒ enabled	Acknowledge each commands.
Stop on any error	☒ enabled	Stop communication on any error.
Command delay	50	Delay between each command to be sent.
Support READ ALL	☐ disabled	Support the READ ALL protocol.
Security setting		
User password		The user password (no authentication if blank).
Admin password		The administrator password (no authentication if blank).

Advanced Command	At program startup	Set the action that to be performed at program startup
	Field by field scanning	Enables/disables using accelerated protocol.
	Max number of field	Sets the number of fields on eeprom size
	User error dialog	Enables/disables the report communication error as dialog boxes
	Wait for acknowledgement	Enables/disables the acknowledgment of each command.
	Stop on any error	Enables/disables communication stop on any error
	Command delay	Sets the delay of sending between each command
	Support READ ALL	Enables/disables the supporting of the READ ALL protocol
Security Setting Info	User password	Administrators can enter a password for users here when logged in as Admin.
	Admin password	Administrators can change the admin password here when logged in as Admin.

Status

In this menu, you can call up current status information such as fan status, temperature, firmware etc.

User Setup Service Status Gamma Preference Reports		
Refresh	Parameter	Value
Update	Status	
	Temperature	27
	Fan 1 Status	0
	Fan 2 Status	0
	Fan 1 Speed	0
	Fan 2 Speed	0
	Info	
	Software Revision	V01.01.12
	Software Version	emST3.4-DIS005

Status	Temperature	Temperature of the device in °C
	Fan 1 Status	1 = normal mode 0 = error mode
	Fan 2 Status	1 = normal mode 0 = error mode
	Fan 1 Speed	Information about the fan speed 1 (0 - 255 depending on device temperature)
	Fan 2 Speed	Information about the fan speed 2 (0 - 255 depending on device temperature)
Info	Software Revision	Revision of the software
	Software Revision	Version of the software

Gamma (not supported)

The Gamma program area gives you full control over the gamma curve of the individual colours (red, green, blue).

) NOTE:
This feature is not supported for display video walls.

Preference

The communication to the first display is defined in this menu.

Communication Settings

Use local area network

With an Ethernet connection between the PC and the first display

- **Socket:** Standard 7992
- **First device IP Address:** IP address of the connected display (the first display)
- **Each device has a network board:** With an Ethernet connection when each display has its own network card.
- **Apply changes:** Accepts the new settings

You can check on the **Reports** page if the connection is active.

Use serial port

With an RS232 interface connection between the PC and the first display

(this is the standard communication gateway)

- **Serial Port:** COM port used
- **Baud rate:** Standard is 115200
- **Bits:** Standard is data = 8, stop = 1
- **Parity:** Standard is None
- **Apply changes:** Accepts the new settings

You can check on the **Reports** page if the connection is active.

Color analyzer option

Probe model

Communication port

Percentage of tolerance of the measures

Display the gradient color into the gamma page

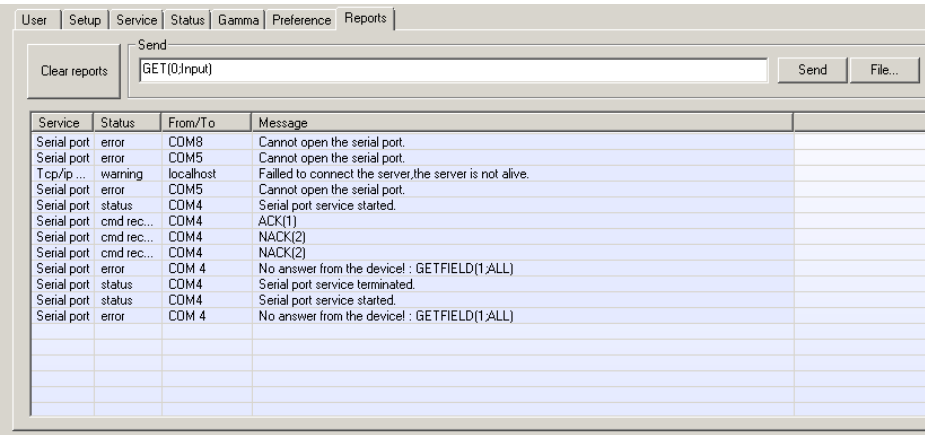
Not Relevant for displays!

Pattern generator

Running on machine (name or IP address)

Reports

All software status messages are collected and can be monitored here. Command sequences can also be generated and sent to a display.



Clear reports		Deletes all reports
Send	Send	Sends the command in the Send field to the selected display.
	File	Selects a previously created file from the file directory. The selected file is added to the Send window and can then be sent to the selected displays by clicking on Send .

) **NOTE:**
Only administrators have the authorisation to send commands (logon with password).

Command sequences are used to control the displays. A separate manual for serial commands is available to show you how to generate command sequences. This can be requested from the eyevis service.

Effects in continuous operation of LCDs

False installation or use of the display during operating time may bring undesirable partly visible effects. The internal structure of LCD panel may be changed by outside influences with partly visible effects.

Image sticking

This phenomenon which named alternatively "image retention", "ghost image", "memory effect" or "remanent image" appears if the fluid crystals of the panel depart from the initial position. This undesired effect may occur if same content is showed continually for long time and thereafter the content changes. Then possibly old content is still visible as "shade". These effects are wear marks, which may be intensified by unsuitable usage. It is not a defect!

Image Sticking must not mixed up with "Burn-in", which is a known fact of plasma displays and cathode ray tubes and is based on completely different physical mechanisms. Heavy "Image Sticking" may be reversed by long switch off of the LCD/TFT displays.

Image Sticking of TFT panels is excluded from the warranty.

Mura

Further effect is Mura (a Japanese term for unevenness), which is visible as cloud formation. These clouds are particularly visible at low brightness. The most probably for the occurrence of Mura is operating the system in wrong temperature specifications. These may be caused by to high ambient temperature as well as poor air supply caused by inconvenient installation or polluted ventilation system.

Mura of TFT panels is excluded from the warranty.

Shade formation

Dust particle may build up inside the panel caused by high ambient pollution level. These particles climb up in the panel. This effect starts mostly in corners of the rim through the different layers by convention and capillary formation. These pollutions may be reversed by resolving and cleaning of the panel components in our clean room.

Shade formation of TFT panels by pollution is excluded from the warranty.

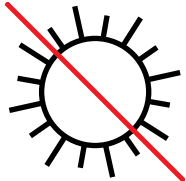
Prevention of undesirable effects



NOTICE!

Reduce ambient temperature

- ▶ Operate the device at an ambient temperature of max. 25°C.
- ▶ Ensure that the ventilation slots of the display are not covered or polluted by dust.



NOTICE!

Avoid direct sunlight

This extends the life-time of the display and reduce the risk of undesirable effects.

- ▶ Do not install or store the device in places with direct sunlight or near heat sources.



NOTICE!

Operating time of device

The operating time should not be longer than 20 hours a day. The display should be switched off for 4 hours. This extends the life-time of the display and reduce the risk of undesirable effects.

- ▶ Switch off or turning the device to Stand-by-mode for 4 hours.

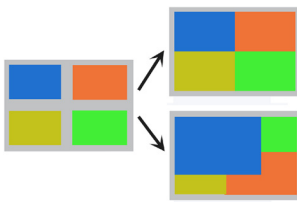


NOTICE!

Avoiding static images

Static images increase the risk of undesirable effects.

- ▶ Activate a screen saver on the computer for these signals if they do not have to be surveyed as long as they do not change their content (e.g. logos, pictograms...).



NOTICE!

Scaling of the input signals

Avoid the static black borders on the screen.

- ▶ Scale up signals, that do not have the same native aspect ratio as the display, to use the entire screen area.
For example, a 4:3 image signal should be scaled up to 16:9 format to fill the complete screen.



NOTICE!

Reduce the display brightness to 50 %

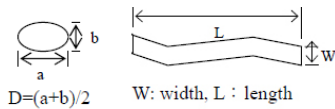
The reduced brightness enlarges the life-time of the display and allows later readjustments of the brightness level.

- ▶ Operate the device with brightness to 50% if possible.

Evaluation of visual range

Pollutions

By the production process and handling of the displays occurs kinds of pollution in range of vision. It applies to inclusions, blistering, depressions, marks, scratches. The following tolerance limits is specified for bonded glass surfaces and optional touch surfaces:



Tolerance limits for bonded glass surfaces

Kind of pollution	Critical value
Inclusions / Marks	$0,5 < D \leq 1,2 \text{ mm}, N \leq 16$
Depressions / Blistering	$0,3 < D \leq 1,2 \text{ mm}, N \leq 16$
Scratch / Lints	$0,15 < W \leq 0,25 \text{ mm}, 0,3 < L \leq 10,0 \text{ mm}, N \leq 10$

Tab. 1: Critical values of pollutions for bonded glass surfaces

Tolerance limits for optional touch surfaces

Pollution Category	Critical value	Acceptable total number [G] of defects	Critical value
Inclusions / Marks	$D \leq 1,5 \text{ mm}$	Panel size to 55"	$N \leq 8, G \leq 12$
Depressions / Blistering	$D \leq 1,5 \text{ mm}$	Panel size from 56" to 65"	$N \leq 9, G \leq 14$
Scratch / Lints	$W \leq 0,25 \text{ mm}, L \leq 15,0 \text{ mm}$	Panel size from 66" to 70"	$N \leq 11, G \leq 15$
		Panel size from 71" to 82"	$N \leq 14, G \leq 18$
		Panel size from 83" to 110"	$N \leq 16, G \leq 24$

Tab. 2: Critical values of pollution for touch surfaces

Tab. 3: Acceptable total number of defects for touch surfaces

D = diameter, L = length, W = width, N = number of pollution of a category, G = total number of mechanical defects or surface pollutions

Failure of pixel

A image point (Pixel) consist of 3 sub pixel with basic colour red, green and blue. The physical dimension of a pixel (also called pixel pitch) differs depending on the model (look at the data sheet for more information). If a pixel failure is larger than 1/2 pixel, it counts as pixel failure according to definition. 3 kinds of pixel failures are differentiated:

- Permanently bright pixel.
The bright pixel is permanently and with constant size at black testing image.
- Permanent dark pixel.
The pixel appears permanently dark and constant size at red, green and blue testing image.
- Two pixels lying next to each other.
Two directly bordering pixels shows a defect.



For more information about acceptable number of dot defects according to ISO 9241 for Class II, see chapter „Overview acceptable total number of dot defects“ on page 60.

Overview acceptable total number of dot defects

Isolated pixel errors can not be eliminated for production reasons. The standard ISO 9241-307 specify the acceptable total number of dot defects for class II panels. You can see the tolerance limits in the following table:

Tab. 4: Acceptable total number of defects (ISO9241-307)

Acceptable total number of dot defects according to ISO 9241-307 for class II panels (in relation to the resolution)				
Resolution	Defect type 1	Defect type 2	Defect type 3	
	Bright dot	Black dot	Defect bright subpixel Total = $5-n^*$ $n^* = 0..[5..11]$	Defect black subpixel Total = $2xn^*$ $n^* = 0..[5..11]$
1 million pixel	2	2	5 $5-n^*$ 0	0 $2xn^*$ 10
XGA 1024 x 768 (0.786 million pixel)	2	2	4 $4-n^*$ 0	0 $2xn^*$ 8
SXGA 1280 x 1024 (1.310 million pixel)	3	3	7 $7-n^*$ 0	0 $2xn^*$ 14
WXGA 1366 x 768 (1.049 million pixel)	3	3	6 $6-n^*$ 0	0 $2xn^*$ 12
WXGA+ 1440 x 900 (1.296 million pixel)	3	3	7 $7-n^*$ 0	0 $2xn^*$ 14
HD 1920 x 1080 (2.073 million pixel)	5	5	11 $11-n^*$ 0	0 $2xn^*$ 22

Example: Total number of defect subpixel
(In relation to 1 million pixel)

Number of bright subpixel $n = 4$, then are only 2 black subpixel allowed (see on right side)

→ 4 bright subpixel + 2 black subpixel

5 bright subpixel + 0 black subpixel
4 bright subpixel + 2 black subpixel
3 bright subpixel + 4 black subpixel
2 bright subpixel + 6 black subpixel
1 bright subpixel + 8 black subpixel
0 bright subpixel + 10 black subpixel

Troubleshooting guide

Before calling service personnel, please check the following chart for a possible cause of the trouble you are experiencing.

Symptom	Check these things
No picture	• Check if the power cord is plugged in. • Check if the power is not OFF or standby. • Check if the auxiliary equipment is connected properly. • Check if the input setting is correct. • Check if the signal is suitable.
The remote control does not operate	• Check if the batteries are inserted matching the + and - marks of the battery compartment. • Check if the batteries are exhausted. • Aim at the remote control sensor when using the remote control.
The picture colour is pale, or not clear	• Check the picture quality adjustment. • Check if the cables are connected correctly.

Malfunction or trouble

CAUTION

Smoke or peculiar smells

If the unit is still used in this condition, it may cause a fire or an electric shock.

- ▶ Remove the power plug from the outlet immediately.
- ▶ Make sure that the smoke or smell has stopped, then contact your dealer for inspection.

CAUTION

Liquids or objects inside the device

If you continue to use the device after water, other fluids or objects have been spilled or dropped, this may cause a fire or an electric shock.

- ▶ Remove the power plug from the outlet immediately.
- ▶ Contact your dealer for inspection.

CAUTION

Damage caused by dropping the device

If you continue to use the device after it has been dropped or the housing has been damaged, it may cause a fire or an electric shock.

- ▶ Remove the power plug from the outlet immediately.
- ▶ Contact your dealer for inspection.

CAUTION

Damaged or hot power cable

If you continue to use the device even though the power cable is damaged or becomes hot, it may cause a fire or an electric shock.

- ▶ Remove the power plug from the outlet immediately.
- ▶ Contact your dealer for inspection.

Warranty terms and conditions

Duration and validity of warranty

The specified product is under warranty for 24 months beginning from the date of delivery by eyevis, valid for the European Union. 12 months applies to products that were purchased outside the European Union. Warranty services during the warranty period do not extend the validity period of the warranty.

Proof of purchase

The sales agreement or the invoice (original invoice with serial number) of the first purchaser must be presented as proof of purchase to claim warranty services. If the customer cannot provide this evidence of purchase, the warranty period is dated back to the date of purchase at the distributor (first supplier) plus one month.

Warranty service or exchange during warranty period

If the product shows any faults or defects during the warranty period, eyevis provides the following services in compliance with the warranty:

Dead On Arrival (DOA)

The customer has to inspect each delivery immediately upon receipt. If any packaging is damaged, the customer has to notify his carrier immediately at goods receiving. If a defect is detected at first unpacking (packaging is not damaged), the customer has to notify his specialist supplier (point of purchase) immediately about the defect. Otherwise the product will be treated under usual terms of warranty.

Return-to-Base-Warranty (Bring-In Warranty)

Defective parts or products must be sent back carriage free to eyevis. In certain circumstances, the product can be sent back to the specialist supplier (place of purchase) or to eyevis service center (country of purchase).

If the product requires repair under warranty, the customer is responsible for the cost of transportation to eyevis. eyevis bears only the one-way costs for the reshipment of repaired or exchanged products to the customer. During transit, the goods are at the owner's risk.

Repair and return

The defective product has to be sent to eyevis by the customer and is repaired within 21 days. In this case, eyevis bears the costs for required components that may be required or the arising working time, as well as for the costs for reshipment to the customer.

Temporary exchange equipment during repair time

(only products under warranty)

Bring-in warranty. The customer can request a temporary exchange product during the repair time if the product under warranty cannot be repaired within 30 days. Depending on availability, eyevis decides whether the equipment can be replaced. Any costs of a return delivery for the exchange equipment are borne by the customer.

Warranty on repairs

As a general rule, repairs or replacements do not extend or restart the warranty period. The repaired parts/components will be treated under warranty for 3 months for same kind of problems.

Warranty exclusions

General exclusions

This warranty covers only malfunction due to any defect in material and/or workmanship of a product put into circulation by eyevis . A guarantee is therefore excluded for any faults and defects beyond the responsibility of the eyevis, particularly in cases of:

- Improper use, mechanical damages (e.g. marks caused by scratching, pressure or breaking), improper storing or cleaning, transport damages, misuse, or any other reason the customer or a third party is to blame for, especially if the instructions contained in the manual are not adhered to.
- Display damages caused by the permanent representation of static images (or partially static images).
- Failures or fluctuations of the electrical mains supply, the air conditioning system, or other environmental conditions.
- Abnormal operating conditions, including smoke (e.g. cigarette smoke) and dust.
- Defects caused by normal wear and tear or defects caused by lack of service and maintenance (e.g. cleaning the filter).
- Act of God, fire, flood, aggressive chemical, aggressive biological activity, event of war, vandalism, accidents, etc.
- Errors of all kinds of using defective or incompatible accessories. (Not including components delivered from eyevis which are covered by the product's warranty).
- Attempted repair, setting, change, installation, or maintenance by a person not authorized by eyevis.

"Image Sticking" (memory) effect and "Mura"

see chapter „Effects in continuous operation of LCDs“ on page 57.

Failure of pixel

see chapter „Evaluation of visual range“ on page 59.

Accessories

Accessories, such as cardboard boxes, packaging, batteries and other components that are used in connection with this product and that expected to be exchanged are not covered by this warranty.

Factory-applied serial number

A product that's serial number is damaged, changed, or removed is no longer covered by this warranty.

Service contact

The reaction time to claim a right given by this warranty starts with the customer's announcement of the claim to eyevis. It is calculated in accordance with the standard service hours of eyevis.

For information about eyevis service, please visit www.eyevis.de.

Advised procedure for raising a claim

Consider the manual before raising a claim

See the sections on "Troubleshooting" and in the manual and check whether the problem might be solved on-site before raising a claim referring to this warranty.

Prepare necessary information

If the problem still exists, the customer should try to get support from a regional eyevis partner.

Please prepare the following information:

- Product identification (model/type) and serial number of the device
- Date and place of purchase or eyevis order number (e.g. AUF-...)
- A description of the problem in hand
- Pick-up address and contact information
- A description of the requested service

Approval by eyevis

After performing an analysis of the faults and damages of the device, eyevis will approve your warranty claim if the necessary requirements are fulfilled.

Service code: RMA number

In case of a defect, the customer will receive a service code the RMA number. eyevis will prepare the service requested by the customer.

Packing

The customer has to pack the defective device properly in the original box, to label it as fragile, and to attach the RMA number visibly on the box. eyevis can provide a new original box on request. The customer is liable for damages caused by the use of improper or unsuitable packaging.

Transport

The customer arranges the transport of the device to eyevis.
For more information, please contact eyevis.

Costs not covered by warranty defects

eyevis reserves the right to charge the customer for costs incurred due to complaints concerning defects or faults that are not covered by warranty.

Legal and other claims

There are no other express or implied warranties, representations, or conditions than those stated in this warranty. Other legal or contractual claims, including against the seller of the product, are excluded as far as eyevis has provided service based on this warranty.

This warranty does not affect or have influence on other legal guarantee claims or other contractual claims of the customer against the seller of the product. These claims can be made alternatively to the claims referred to in this warranty document.

Limitations of liability

In cases of slight negligent breaches of duty, the liability of eyevis is limited to the direct, foreseeable, and contract-typical average damage. The slightly negligent breach of minor contractual obligations excludes the liability.

eyevis will not be liable for any loss, damage or alterations to third party accessories, hardware or software or programs, data or information stored on any media or any part of the product, no matter how it occurs, or for any loss or damage arising from loss of use, loss of profits or revenue, or for any resulting indirect or consequential loss or damage.

The policy sum regarding all requirements of the warranty does not exceed, at discretion of eyevis, the original purchase price of the product or alternatively the costs of substitution of the product.

The warranty shall not apply to repairs or service necessitated by normal wear and tear or for lack of reasonable and proper maintenance.

As far as the liability of eyevis is excluded or limited, this also applies to the personal compensation liability of its staff, employees, associated employees, agents, and auxiliary persons.

The preceding limitations of liability do not apply to the customer's claims derived from the Product Liability Act and to claims concerning damages to the body or health or in case of the loss of the life of the customer.

Appendix

Appendix: Technical specification

) EYE-LCD-4700-USN-LD-FX

LCD DISPLAY

Model Name:	EYE-LCD-4700-USN-LD-FX
Panel Type:	a-Si TFT
Installation:	47 inch (ca. 119 cm)
Screen Size:	1039.7 × 584.8 mm
Active Display Area:	Landscape or Portrait Installation possible
Display Resolution:	Transmissive mode, normally black
Colours:	1,920 × 1,080 Pixel (full HD)
Brightness:	1,07G (10-Bit Colour Processing)
Contrast:	450 cd/m ² (typ.)
Viewing Angle:	1200 : 1 (typ.)
Response Time:	178° H/V
Backlight:	12 ms
Active Display Area:	Direct LED
Backlight Life-Time:	> 50,000 hrs (Luminance <50%)
System MTBF:	> 50,000 hrs
24/7 Operation*:	Yes (recommended operation: 18/7)

CONNECTORS & CONTROLS

Inputs ² :	Video, Y/C, DVI-I (digital/analog), HDMI, DisplayPort, RS232
Outputs ² :	DisplayPort
Internal Matrix:	Yes, 10 × 10

MECHANICAL

Display:	1045 × 590 × 109.4 mm (W × H × D)
Bezel Width:	Bezel-to-Bezel: 1.7 mm bottom/right, 3.2 mm top/left (Active-to-Active: 1.85 mm bottom/right, 3.35 mm top/left)
Weight:	24 kg
VESA Mount:	400 × 600

ELECTRICAL

Power Consumption:	140 Watt
Input Voltage:	100V - 240V AC, 50/60 Hz
Operating Temperature:	typ. 0 - 40 °C
Humidity:	typ. 10-80 % RH (no condensation)

OTHER

Handling:	Handles for simple and safe transport and installation
Cooling:	Fanless design

OPTIONS

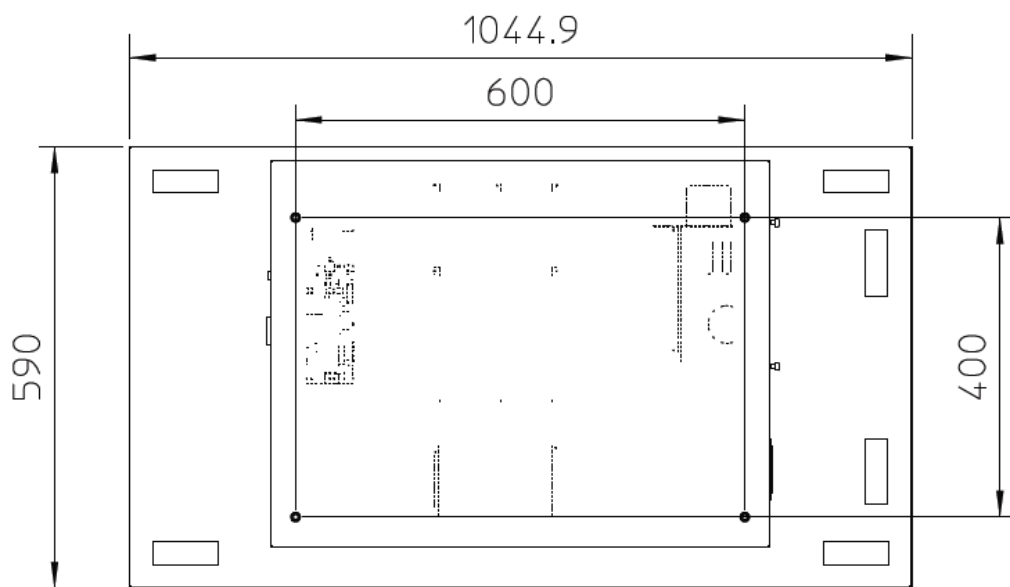
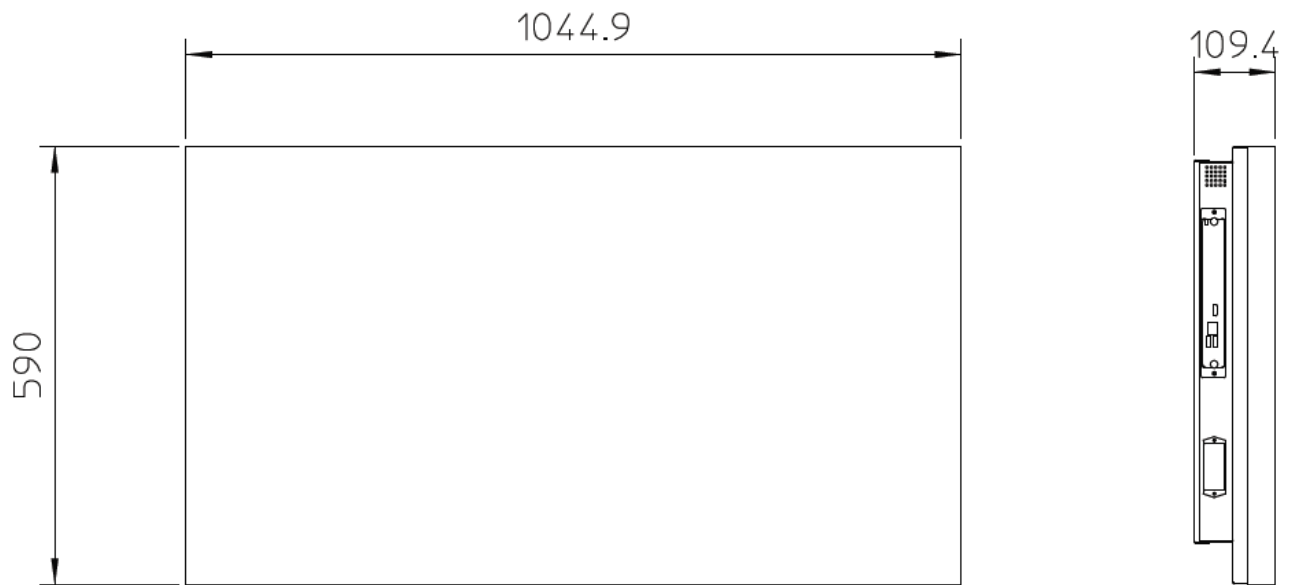
OPS Slot:	OPS standardized input slot for OPS-PC and additional inputs
Front-Service Option:	Full front-service Landscape/Portrait video wall mount
Colour Adjustment:	EYE-LCD-CAS colour adjustment system
Touch:	Custom infrared touch overlay for video walls

¹ When observing required terms and condition of operation

² Possible for signals up to 4K if supported by the signal source/graphic card on output side

Dimensions

Units in mm.



Appendix: RS232 protocol

General description

The eyevis LC Displays can be controlled using an ASCII-serial protocol. Each display is assigned an ID and can be addressed in the protocol using this ID. Commands can either be sent to a single ID or to all devices simultaneously (broadcast mode). Device with ID 1 is the master and controls and relays communication between the devices.!

The following user commands are available.

SET	Sets parameters and executes commands
GET	Recall actual parameter values
SAVE	Save parameters permanently in memory

As response there will be the **Value**, an **ACK** (success) or **NACK** (error) returned.

Command description = case sensitive!

Communication settings

Communication:	RS232
	115200Baud, 8, n, 1
Connection:	1:1, RxD, TxD, GND

ID assignment

Each display has to be assigned a unique ID. IDs can be assigned automatically by sending SET(0;Display Auto ID;1) to the first device.

Description of commands

Type(ID;Command;Value)

Instruction	GET, SET or SAVE (see "General Description")
ID	Display address
Command	Command from the display database
Value	Value of the data

Example: Following command will change the values of the variables in the display:

Command	SET(1;Input;0)
Response	ACK(1)

Set the current input source to Display Port.

GET(ID;Command)

ID = Display address

Command = Command from the display database

The actual values of the display will be returned.

e.g.:

Command	GET(1;Input)
Response	DATA(1;Input;0)

Query the current input source for display 1. Current Input Source is Display Port.

SAVE(ID;ALL)

ID = Display address

Command	SAVE(1;ALL)
Response	ACK(1)

Values are automatically saved after change. Due to different internal processor design, this separate SAVE command is obsolete. For compatibility, it's still implemented and ACK(ID) will be returned always.

Broadcast

Sending commands using ID=0 is a broadcast to all connected devices. Use carefully to avoid unintended overwriting of existing values. Flow control needs to be implemented by control system, using ACK reply estimation.

e.g.:

Command	GET(0;Input)
Response	DATA(1;Input;0)DATA(2;Input;1)....

Command	SET(0;Input;0)
Response	ACK(1)ACK(2)ACK(3)

Remarks

For the Power-Command the behaviour of the broadcast command differs from the Power-Command for individual devices. A SET(0;Power;0) will set all devices to deep-sleep mode. In this mode communication with individual devices is not possible, especially the Power-Command sent to and individual ID behind the master device will not work. Please use SET(0;Power;1) to power on the entire wall again.

RS232 command list

	Function	Command	Possible Values	Default Values	Comment
Power	Switch the LCD On or Off	Power	0=Off, 1=On	1	Sending to an individual ID will enable Sleep mode. SET(0;Power;0) will set the entire wall to deep sleep mode. Cf. remarks in the broadcast section above
	Enable Sleep Mode	Sleep	1=On,0=Off	0	Enable Standby-Mode that still allows communication with individual devices
Input	Input Source	Input	0=DP 1=HDMI 2=DVI 3=VGA 4=CVBS 5=YC 6=SLOT-IN	0	
	Automatic Input Scanning	Source Scan	0=Off 1=On	0	
Picture	Contrast	Contrast	0-100	50	
	Brightness	Brightness	0-100	50	
	Sharpness	Sharpness	0-24	12	
	Backlight	Backlight	0-100	100	
	ALC (=Ambient Light Control) Automatically control backlight brightness	ALC	0= Off, 1= On	0	
	ALC Value	ALC Value	0-100		
	Local Dimming	Local Dimming	0= Off, 1= On		
Color Management	Color Balance	Color Balance	0=Warm 1=Normal 2=Cold 3=User	1	
	Color Saturation	Color Saturation	0-100	50	
	User Red Gain	User Red Gain	0-100	100	Set individually for each device
	User Green Gain	User Green Gain	0-100	100	Set individually for each device
	User Blue Gain	User Blue Gain	0-100	100	Set individually for each device
	User Red Offset	User Red Offset	-50-50	0	Set individually for each device
	User Green Offset	User Green Offset	-50-50	0	Set individually for each device
	User Blue Offset	User Blue Offset	-50-50	0	Set individually for each device
ID Settings	Automatically assign Display IDs through all connected Devices	Auto Display ID			Trigger by sending value1
	Force a new ID on the Device	Force Display ID			Give new ID as argument
	Reset assigned display ID to 1	Reset Display ID			Trigger by sending value 1

Matrix	Matrix Mode	Enable Matrix	0=Off 1=On	0	
	Matrix Size X	Matrix Size X	1-10	1	
	Matrix Size Y	Matrix Size Y	1-10	1	
	Matrix Position X	Matrix Pos X	1-10	1	Set individually for each device
	Matrix Position Y	Matrix Pos Y	1-10	1	Set individually for each device
	Matrix Cropping X %	Matrix Crop X	1-100	0	
	Matrix Cropping Y %	Matrix Crop Y	1-100	0	
	OSD Size	OSD Zoom	0=Normal 1=Big	0	
PC RGB	Timing	Timing			Read Only Format: HxV@Freq
	RGB Auto Adjust	Autoadjust		1500	Trigger by sending value 1
	RGB H-Total	H Total	0-5000	2500	
	RGB H-Position	H Position	0-5000	2500	
	RGB V-Position	V Position	0-5000	0	
	RGB Phase	Phase	0-63	1500	
OSD	OSD Language	OSD Language	0 =English 1=German	0	
	OSD Transparency	OSD Transparency	0-10	0	
	OSD Timeout	OSD Timeout	0-10	0	
Advanced Setup	DVI-I EDID	DVI-I EDID	0=Digital 1=Analog		
	DP Switch	DP Switch	0 = 1.1 1 = 1.2 2 = Auto		
	Smart ISP	Smart ISP			Trigger by sending value 1
	Reset Factory Defaults	Reset Defaults			Trigger by sending value 1
Audio Settings	Audio Volume	Volume	0-32	20	
	Max Startup Volume	Startup Volume	0-32	32	
	Input Level	Input Level	0-100	50	
	Audio Delay	Audio Delay	0-100	0	
Status	Device Temperature	Temperature	0-1000		0
	Fan 1 Status	Fan 1 Status	Read only		Read Only
	Fan 2 Status	Fan 2 Status	Read only		Read Only
	Fan 1 Speed	Fan 1 Speed	0-255		30
	Fan 2 Speed	Fan 2 Speed	0-255		30
Info	Software Revision	Software Revision			Read Only
	Software Version	Software Version			Read Only
	Serial Number	Serial Number			Read Only

Appendix: Timings

Timings (30Hz Table)		H-Freq / KHz	V-Freq / Hz	Pixelclock / MHz
4K2K	3840 x 2160 x 30 Hz (only DisplayPort input)			

Timings (60Hz Table)		H-Freq / KHz	V-Freq / Hz	Pixelclock / MHz
EDTV	480I/525I -720 x 240 x 60I	15,7	59,9	13,4706
	576I/625I -720 x 288 x 50I	15,6	50	13,4784
	480P -720 x 480 x 60P	31,4	60	26,9412
	576P/ -720 x 576 x 50P	31,2	50	26,9568
HDTV	(HDTV) 720P(50Hz) -1280 x 720 x 50P	37,5	50	74,25
	(HDTV) 720P(60Hz) -1280 x 720 x 60P	44,9	60	74,085
	(HDTV) 1080I(50Hz) -1920 x 1080 x 50I	28,1	50	74,184
	(HDTV) 1080I(50Hz) -1920 x 1080 x 50I smpte 295m	31,2	50	74,1312
	(HDTV) 1080i Australian -1280 x 1152 x 50P	31,2	25	71,8848
	(HDTV) 1080I(60Hz) -1920 x 1080 x 60I	33,7	60	74,14
	(HDTV) 1080P(25Hz) -1920 x 1080 x 25P	28,2	25	74,448
	(HDTV) 1080P(30Hz) -1920 x 1080 x 30P	33,7	30	74,14
	(HDTV) 1080P(60Hz) -1920 x 1080 x 60P	67,5	60	148,5
	(HDTV) 1080P(50Hz) -1920 x 1080 x 50P	56	50	147,84
VESA	2560 x 1600 x 60 Hz CVT	98,7	60	268,464
	2560 x 1440 x 60 Hz CVT	88,8	59,9	241,536
	1600 x 1200 x 60 Hz	75	60	162
	1920 x 1200 x 60 Hz	74,5	60	193,104
	1600 x 1200 x 60 Hz RB	74	60	130,24
	1920 x 1200 x 60 Hz RB	74	60	153,92
	1920 x 1080 x 60 Hz -148,5MHz	67,5	60	148,5
	1920 x 1080 x 60 Hz -CVT	67,1	60	172,8496
	1920 x 1080 x 60 Hz -CVT RB	66,6	60	138,528
	1400 x 1050 x 60 Hz	65,3	60	121,7192
	1680 x 1050 x 60 Hz	65,3	60	146,272
	1400 x 1050 x 60 Hz RB	64,7	60	100,932
	1680 x 1050 x 60 Hz Reduce Blanking	64,7	60	119,048
	1280 x 1024 x 60 Hz	63,9	60	107,8632
	1600 x 1000 x 60 Hz CVT	62,1	60	132,1488
	1600 x 1000 x 60 Hz CVT RB	61,6	59,9	108,416
	1600 x 900 x 60 Hz RB	60	60	108
	1280 x 960 x 60 Hz	60	60	108
	1440 x 900 x 60 Hz	55,9	60	106,4336
	1440 x 900 x 60 Hz RB	55,5	60	88,8
	1280 x 800 x 60 Hz	49,7	59,8	83,496
	1280 x 800 x 60 Hz RB	49,3	59,9	70,992
	1024 x 768 x 60 Hz	48,3	60	64,9152
	1366 x 768 x 60 Hz RB	48	60	72
	1280 x 768 x 60 Hz	47,7	60	79,3728
	1366 x 768 x 60 Hz	47,7	59,8	85,4784
	1360 x 768 x 60 Hz	47,7	60	85,4784
	1280 x 768 x 60 Hz - RB	47,3	59,9	68,112
	1280 x 720 x 60 Hz	45	60	74,25
	1280 x 720 x 60 Hz	44,7	60	74,3808
	800 x 600 x 60 Hz	37,8	60,3	39,9168
	800 x 600 x 56 Hz	35,1	56,2	35,9424

VESA	720 x 576 x 60 Hz	35,9	60	32,7408
	640 x 480 x 60 Hz	31,5	60	25,2
	848 x 480 x 60 Hz	31	60	33,728
	848 x 480 x 60 Hz - RB	29,8	60	30,0384

Timings (70Hz Table)		H-Freq / KHz	V-Freq / Hz	Pixelclock / MHz
VESA	1600 x 1200 x 75 Hz	93,7	75	202,392
	1600 x 1200 x 70 Hz	87,5	70	189
	1400 x 1050 x 75 Hz	82,3	75	156,0408
	1680 x 1050 x 75 Hz	82,3	75	186,9856
	1680 x 1050 x 75 Hz	82,3	74,9	186,9856
	1680 x 1050 x 75 Hz Reduce	81,5	74,9	149,96
	1600 x 1200 x 65 Hz	81,2	65	175,392
	1280 x 1024 x 76 Hz	81,1	76,1	134,9504
	1280 x 1024 x 75 Hz	79,9	75	134,8712
	1600 x 1000 x 75 Hz	78,3	74,8	169,128
	1280 x 1024 x 72 Hz	76,8	72	132,7104
	1280 x 1024 x 70 Hz	74,6	70	128,9088
	1152 x 900 x 76 Hz	71,5	76	110,968
	1440 x 900 x 75 Hz	70,6	75	136,6816
	1152 x 870 x 75 Hz MAC	68,1	75	105,6912
	1152 x 864 x 75 Hz	67,5	75	108
	1152 x 864 x 70 Hz	63	70	96,768
	1280 x 800 x 75 Hz	62,8	74,9	106,5088
	1152 x 900 x 66 Hz	61,7	66	94,7712
	1280 x 768 x 75 Hz	60,3	74,9	102,2688
	1024 x 768 x 75 Hz	60,1	74,9	81,736
	1024 x 768 x 75 Hz	60,1	75	78,8512
	1280 x 800 x 72 Hz	60	72	102,72
	1280 x 800 x 70 Hz	58,3	70	98,8768
	1024 x 768 x 72 Hz	57,6	72	78,336
	1024 x 768 x 70 Hz	56,4	70,1	74,8992
	1280 x 720 x 75 Hz	56,2	74,8	95,3152
	800 x 600 x 72 Hz	48,1	72,2	50,024
	800 x 600 x 75 Hz	46,8	75	49,4208
	640 x 480 x 72 Hz	37,8	72	31,4496
	848 x 480 x 72 Hz	36	72	39,168
	848 x 480 x 75 Hz	37,7	74,8	41,0176
	640 x 480 x 75 Hz	37,5	75	31,5
	640 x 480 x 66 Hz	35	66,7	30,24
	848 x 480 x 70 Hz	35	70	37,52
	640 x 400 x 70 Hz	31,5	70,1	25,2
	720 x 400 x 70 Hz	31,5	70	28,35
	640 x 350 x 70 Hz	31,5	70	25,2

Timings (80Hz Table)		H-Freq / KHz	V-Freq / Hz	Pixelclock / MHz
VESA	1400 x 1050 x 85 Hz	93,9	85	179,5368
	1280 x 1024 x 85 Hz	91,1	85	157,4208
	1280 x 960 x 85 Hz	85,9	85	148,4352
	1440 x 900 x 85 Hz	80,4	84,8	156,9408
	1152 x 864 x 85 Hz	77,1	84,8	119,6592
	1280 x 800 x 85 Hz	71,6	84,9	122,5792
	1024 x 768 x 85 Hz	68,6	85	94,3936
	1280 x 768 x 85 Hz	68,6	84,8	117,4432
	800 x 600 x 85 Hz	53,7	85	56,2776
	640 x 480 x 85 Hz	43,2	85	35,9424
	640 x 350 x 85 Hz	37,8	85	31,4496
	720 x 400 x 85 Hz	37,9	85	35,4744
	640 x 400 x 85 Hz	37,8	85	31,4496
	1024 x 768 - 43	35,5	86,8	44,872

Appendix: Assigning display IDs

To be able to control a combination of displays with a single interface (control software or with one remote control) each display has to be assigned a unique ID. This can be achieved by using automatic ID assignment. Automatic ID assignment follows the topology of the RS232 cabling of the displays and increments the ID by one on each device.

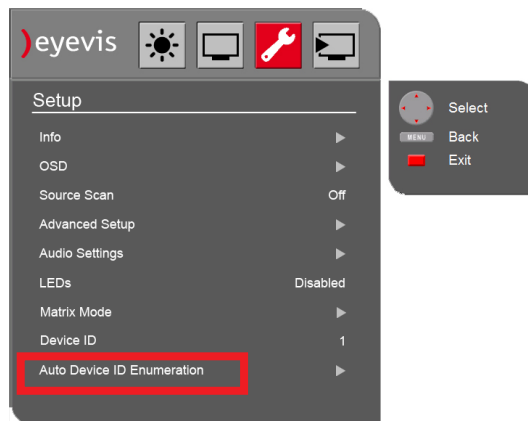
- For the automatic assignment of IDs setup the RS232 daisy chain and connect the first device in the RS232 daisy chain with the control computer. Also plug in the IR-receiver for the remote control.

) NOTE:

It is mandatory the device connected to the control PC is assigned ID 1. Reset the display IDs if necessary.

Trigger automatic adjustments of IDs using the OSD

1. Open the Setup Menu in the OSD.
2. Choose "Auto Device ID Enumeration".



You can test the assignment using the remote control and pressing the button **Address**. Each device will display its assigned ID.

Trigger automatic adjustment of IDs with eyeDeviceSetup

1. Open the eyeDeviceSetup software and open the serial connection in the **Preference** tab.
2. Select Display 1 in the display selection area.
3. Press **Read current** to read parameters from the device.
4. In the Tab **User** in the section **ID Settings** press the button of the field **Auto Display ID**.
5. You can test the assignment using the remote control and pressing the button **Address**. Each device will display its assigned ID.

Trigger automatic adjustment of IDs using a terminal program

1. Open a terminal program and setup to 115200 Baud 8N1.
2. Send SET(0;Auto Display ID;1).
3. You can test the assignment using the remote control and pressing the button **Address**.

☞ Each device will display its assigned ID.

Adjusting automatically assigned IDs

In some cases the automatic ID assignment have to be adjusted manually, e.g. if the layout of the automatically assigned IDs do not match the logical layout required by the control software. This can be achieved by manually adjusting the Display ID in the OSD.

To adjust the ID in the OSD menu:

1. Enter the section **Setup** of the OSD.
2. Adjust the **Device ID**.
3. To activate the newly assigned ID close the OSD.

To adjust the ID by selecting the device in eyeDeviceSetup:

1. Open the **User** tab.
2. Enter a new device ID in the **Device ID** field in the **ID Settings** section.
3. Press **Apply ID** to activate the newly assigned ID.

To adjust the ID via terminal:

1. Open a terminal.
2. Sent the command (see following example).
 - ✎ The new ID will be assigned immediately.

Example for changing the display ID 1 to ID 5:

- `Set(1;Force Display;5)`

Resetting Display IDs

In some cases it may be required to reset all IDs to 1. You can perform the resetting via terminal or the eyeDeviceSetup software.

To reset via terminal:

- Reset all display IDs to 1 by sending `SET(0;Reset Display ID;1)` to the wall.

To reset via eyeDeviceSetup software:

- Trigger **Reset Display ID** in the section **ID Settings** in the **User** tab.

Index

A

ACCESSORIES	62
ACCESSORY BOX	25
APPENDIX	65, 67
DIMENSIONS	66
DISPLAY ID	67
RS232 PROTOCOL	69
SPECIFICATION	65

B

BATTERIES	
CHANGING	31
BRIGHT PIXEL	58

C

CLAIM	63
COSTS	63
LEGAL	63
LIMITATIONS	64
PACKING	63
RAISING A CLAIM	63
RMA	63
SERVICE	62
TRANSPORT	63
CONFIGURATION	
LOADING	48
READING	48
SAVING	48
CONNECTOR PANEL	28
CONNECTORS	27
MAINS	28
CONTROLLING	30
COSTS	63

D

DAISY-CHAIN	29
DARK PIXEL	58
DIMENSIONS	66
DISPLAY ID	67
DOA	61
DOT DEFECTS	59

E

EXCHANGE	61
EXCLUSIONS	62
EYEDEVICE SETUP	43

F

FAILURE	58
BRIGHT PIXEL	58
DARK PIXEL	58
FAILURE OF PIXEL	62
PIXEL	58
FEATURES	23
FRONT SERVICE	26

I

IMAGE STICKING	56
INSTALLATION	26

L

LED	27
LEGAL	63
LIMITATIONS	64
LINKING	29

M

MAINS	28
MALFUNCTION	60
MURA	56

O

ON-SCREEN-DISPLAY	30
NAVIGATING	30
OPENING	30
OSD MENU	32

P

PACKAGING	24
ACCESSORY BOX	25
PACKING LIST	24
PACKING	63
PACKING LIST	24
PIXEL	58
POLLUTIONS	58

R

REMOTE CONTROL	30
RETENTION	
IMAGE STICKING	56
MURA	56
OPERATING TIME	57
SHADE FORMATION	56
STATIC IMAGES	57
TEMPERATURE	57
RMA	63
RS232 PROTOCOL	69

S

SERIAL NUMBER	62
SERVICE	62
SETUP	29
DAISY-CHAIN	29
LINKING	29
SHADE FORMATION	56
SOFTWARE	43
SPECIFICATION	65

T

TOLERANCE LIMITS	58
TRANSPORT	63
TROUBLESHOOTING	60

V

VALIDITY	61
-----------------	----

W

WARRANTY	61
ACCESSORIES	62
DOA	61
DURATION	61
EXCHANGE	61
EXCLUSIONS	62
SERIAL NUMBER	62
SERVICE	61
VALIDITY	61



eyevis GmbH
Hundsschleestrasse 23
D-72766 Reutlingen
Germany

Phone: +49 (0)7121-4 33 03-0
Fax: +49 (0)7121-4 33 03-22
Hotline: +49 (0)7121-4 33 03-290 (netPIX & eyeCON)
Hotline: +49 (0)7121-4 33 03-291 (Cubes & Displays)

web: www.eyevis.de
e-mail: info@eyevis.de
service: service@eyevis.de

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